

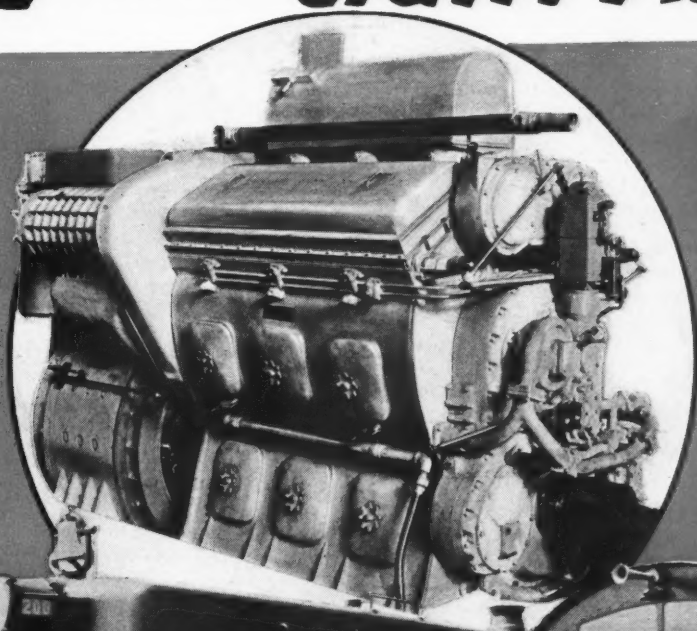
SEPTEMBER 28, 1940

Railway Age

Founded in 1856

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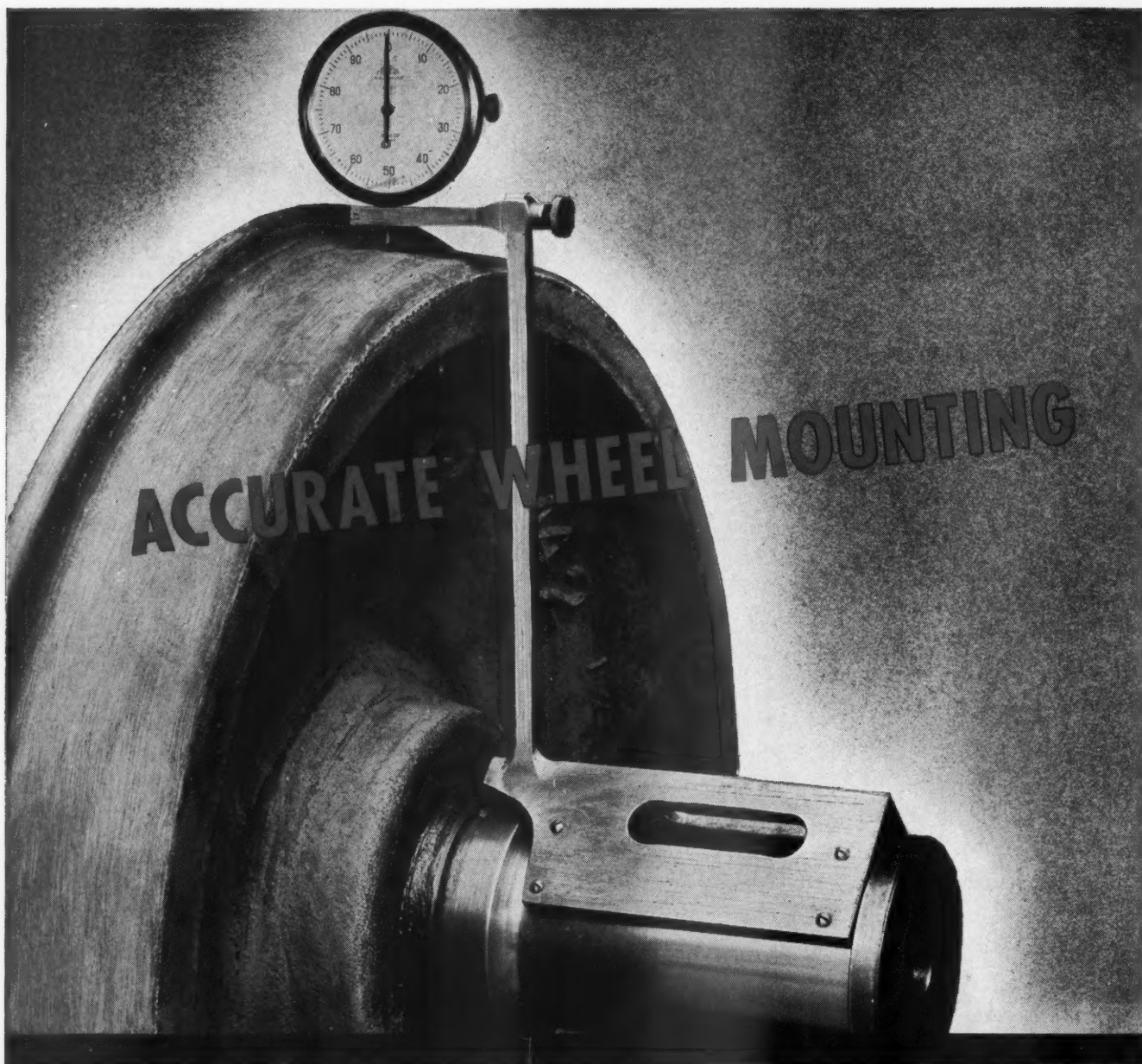
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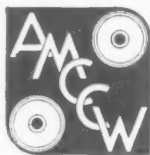
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Consummation of Confiscation

Recently a federal court in Chicago approved the reorganization of the Chicago & North Western Railway Company recommended by the Interstate Commerce Commission, which will wipe out the present 181 million dollars of stock of that company—22 million 400 thousand preferred, and 158 million 400 thousand common.

This was a very significant event in the history of the railways of the United States. A part of the North Western was the first railway built into Chicago, and it has long been one of the country's largest systems. Also, it was for many years one of the most prosperous. There was never any basis for a charge that it was overcapitalized—i. e., that the securities issued by it exceeded the investment made in it; and it paid dividends on its preferred stock ranging from 2½ to 12 per cent, but usually 7 or 8 per cent, in almost every year from 1864 to 1931, and dividends on its common stock ranging from 2 to 10 per cent, but usually 7 per cent, in almost every year from 1868 to 1931.

Naturally the stock of a railway with such a record of earnings and dividends was widely regarded as a conservative and excellent investment; and for many years it usually commanded prices far in excess of its par value. The complete wiping out of the stock means, therefore, that the owners of it have completely lost property which not long since had a value exceeding 181 million dollars.

Wiping Out Billions of Railway Capital

Furthermore, as shown in an editorial in these columns recently (September 14) the Interstate Commerce Commission (or its examiners) has proposed similar reorganizations of 25 railway companies now in bankruptcy. A list of these railways, showing their indebtedness and fixed charges as of July 31, 1940, and the indebtedness and fixed charges they would have after the proposed reorganizations, was published in the *Railway Age* of September 7, page 344. Their aggregate **total** indebtedness would be reduced from 3 billion 708 million to 1 billion 610 million dollars, or 57 per cent; while the **total** indebtedness of the North Western will be reduced 49 per cent. Their aggregate **long-term** debt would be reduced from 3 billion 77 million dollars to 1 billion 610 million, or 48 per cent; while the **long-term** debt of the North Western will be

reduced 40 per cent. The combined fixed charges of these railways would be reduced from 131 million 500 thousand to 39 million 500 thousand dollars, or 70 per cent; while the fixed charges of the North Western will be reduced 80 per cent.

In numerous instances, as in the case of the North Western, all or a large part of the outstanding stock of these railways would be held to have ceased to represent any interest in the properties and to be valueless. But the owners of a corporation's **stock** are legally the owners of its **property**. Therefore, when the owners of stock are thus largely or completely expropriated, the property largely or completely passes into the hands of new owners—who in these cases are its former creditors.

A Thirty Years' Process of Confiscation

These developments are of such great importance that they should be receiving much more attention from the managements of the railways of the United States, from men in other lines of business and from the American people. What has occurred in the case of the North Western, and apparently is to occur in the cases of numerous other railways, is the **consummation of a process of confiscation** which was under way for twenty years before the present depression began, but which is now advancing to its climax under the stimulus of New Deal policies tending to make the depression permanent.

It is easy to identify the exact time when there were initiated the policies the long continuance of which before this depression rendered the entire railway system of the United States more and more financially vulnerable to the attacks of a severe depression. That time was in the early part of 1911 when the Interstate Commerce Commission, in its first important opinion after it was empowered really to fix rates, refused the railways the first general advance in freight rates for which they asked to offset increases in their unit costs. The same general policy of refusing reasonably to adjust rates to costs was continued by the Commission until the adoption of government operation on January 1, 1918; by the Railroad Administration under government operation; and by the Commission after the return of the railways to private operation. The result was an increase, period after period, in the **ratio of operat-**

ing expenses and taxes to gross earnings—or, to state the matter otherwise, a decline, period after period, in the margin of profit and financial safety.

In the nine years ending with 1908, when the railways were recovering from the depression of the 90's and before any government body could effectively regulate their rates or the working conditions and wages of their employees, their operating expenses and taxes combined consumed, on the average, only 70 cents out of each dollar of their gross earnings. In the nine years ending with 1917, during which most of their rates were under effective regulation by the Commission, this ratio of their operating expenses and taxes combined to their gross earnings increased to 75.5 per cent. During the four years 1918, 1919, 1920 and 1921, two of which were years of government operation and deficits, one a year of continued government guarantees and a deficit, and one a year of sharp depression, the ratio averaged 92 per cent. In the nine years 1922-1930, inclusive, it was 82.6 per cent. And, finally, in the nine depression years 1931-1939, it was 86⅓ per cent.

To every student of economics these figures are highly significant. What they show is that for more than 20 years before the present depression began the railway's margin of safety from financial destruction by a great loss of gross earnings due to depression was steadily declining. Assuming no reduction of operating expenses and taxes, it would have required in the nine years ending with 1908 a reduction of 30 per cent in their gross earnings completely to have wiped out their net earnings; in the nine years ending with 1917 a reduction of only 25 per cent; in the nine years ending with 1930 a reduction of only 17.4 per cent. In the nine years 1931-1939, as compared with the nine years 1922-1930, they actually suffered a decline of 39 per cent in gross earnings—with the result that, despite terrific reductions of operating expenses, their average annual net earnings declined 53 per cent and their margin of profit to less than 14 per cent.

The "Fifth Columnists" Who "Softened Them Up"

Now, obviously those responsible for this great decline in the railway industry's financial margin of safety before the depression are largely responsible for the depression's destructive effects upon so large a part of the industry. Who, then, was responsible? Principally the Interstate Commerce Commission, which refused rates high enough to maintain a wider margin of safety when the traffic would stand them, but also all those in business and government who promoted unfair competition to take from the railways traffic that they needed, and, all costs considered, could have handled cheaper than any other carrier.

While, however, those who reduced the railways' margin of profit and financial safety from an average of 30 per cent of their gross earnings in 1900-1908 to an average of only 17 per cent in 1922-1930 were the "fifth columnists" who "softened them up," it has been principally the blitzkrieg of the depression, and policies

affecting business in general and the railways in particular that have unnecessarily protracted the depression, which have financially wrecked large parts of the industry and apparently justified the consummation of the thirty-year process of confiscation in the cases of the 25 railways for which the Commission (or its ex-aminers) has recommended drastic reorganizations.

It is a significant fact that of the twelve important railway systems included in the Commission's list, with capitalizations ranging from 89 million to almost 650 million, only one—the St. Louis-San Francisco—was in bankruptcy on March 4, 1933. The principal reason for the great and sudden change in their fortunes—i. e., the long depression—is indicated by statistics regarding (1) the Class I railways of the United States, (2) the Class I railways of western territory and (3) the Chicago & North Western, given in the table below.

The Blitzkrieg and Policies of Depression

In the nine years 1931-1939, inclusive, the average annual gross earnings of the Class I railways of western territory, as well as of all Class I railways, were 39 per cent less than in the nine years 1922-1930, inclusive, while those of the North Western showed a decline of

CLASS I RAILWAYS, UNITED STATES				Per cent Increase or Decrease
	Average 1922-1930	Average 1931-1939		
Operating revenues	\$6,009,374,629	\$3,657,033,476		-39.1
Net Railway Operating Income	1,043,508,066	500,882,985		-52.0
Non-operating income less miscellaneous deductions	113,168,737	27,976,328		-75.3
Income available for interest ..	1,156,676,803	528,859,313		-54.3
Interest charges	504,081,455	505,220,919		+ 0.2
Net income	652,595,348	23,638,394		-96.4
CLASS I RAILWAYS, WESTERN DISTRICT				
Operating revenues	\$2,254,727,426	\$1,371,792,111		-39.2
Net Railway Operating Income	398,966,203	153,417,924		-61.5
Non-operating income less miscellaneous deductions	73,211,117	52,017,043		-28.9
Income available for interest ..	472,177,320	205,434,967		-56.5
Interest charges	225,859,192	237,530,472		+ 5.2
Net income	246,318,128	*32,095,505		*
CHICAGO & NORTH WESTERN RAILWAY				
Operating revenues	\$149,537,902	\$83,497,049		-44.2
Net Railway Operating Income	20,022,666	3,711,341		-81.5
Non-operating income less miscellaneous deductions	3,400,119	2,661,574		-21.7
Income available for interest ..	23,422,785	6,372,915		-72.8
Interest charges	12,929,824	16,744,455		+29.5
Net income	10,492,961	*10,371,540		*

* Deficit.

44 per cent. The great drop in gross earnings which started the difference between these annual averages occurred in the three years 1930, 1931 and 1932, and obviously was principally due to the beginning of the depression—the gross earnings of the Class I railways having been in 1929 almost 6 billion 300 million dollars and in 1932 only 3 billion 127 million, or over 50 per cent less. The difference of 39 per cent, or 2⅓ billion dollars, between the annual averages of two nine-year periods is as obviously due to continuance of the depression. The 25 railways included in the Commission's list are scattered throughout the country. Although located principally in Western Trunk Line territory, they do include the New Haven in New England, the Erie in Eastern Trunk Line territory, and the Western Pacific in the extreme west—but another evidence that

it has been the depression, and especially its long continuance, that has been the principal cause of insolvency of most of the railways now bankrupt.

Income for Fixed Charges Declines 54 Per Cent for Dividends, 96 Per Cent

Excepting those regarding gross earnings, the statistics given in the accompanying table are presented to indicate what has happened during the depression—principally because of the decline in gross earnings—to the ability of the railways to meet their fixed charges and pay dividends. The figures show that in the nine years 1922-1930, inclusive, all Class I railroads had average "total income" available for fixed charges of 1 billion 157 million dollars, annually, and in the nine years 1931-1939, inclusive, average total income for fixed charges of only 529 million annually, a decline of 54 per cent. They also show that average annual net income available for dividends declined from 653 million in 1922-1930, inclusive, to less than 24 million in 1931-1939, inclusive, or 96½ per cent. As the western group of railways has a higher ratio of operating expenses and taxes to gross earnings—i. e., a narrower margin of profit and safety—the decline in its gross earnings, although relatively the same as for the Class I railways as a whole, caused it to suffer relatively much worse financially. Its average annual income available for interest declined from 472 million in 1922-1930, inclusive, to 205 million in 1931-1939, inclusive, or 56½ per cent, and its average annual net income of 246 million in the former nine years was converted into an average annual deficit of 32 million in the latter nine years.

The North Western happens to be located almost

entirely in Western Trunk Line territory in which, for various reasons, the railways have been for some years making a worse earnings' showing than in any other part of the United States; and its statistics demonstrate that its financial results have deteriorated relatively more than those of the railways of the country as a whole, or even than those of the western group as a whole. In fact, the increase of 29½ per cent in its interest charges, as compared with almost no increase in the interest charges of the railways as a whole, apparently supports the charge that it was not efficiently managed after its return to private operation; but it is nevertheless a fact that, with about the same gross earnings in 1926 and 1929, it made 4 million dollars more net operating income in 1929 than in 1926, and in 1929 had more income available for interest, and more net income after fixed charges available for dividends, than in any previous year since the Great War—all indicating that the acuteness of its financial troubles, as in the case of other railways, has been caused principally by the depression.

Federal Government the Principal Confiscator

It must be fairly obvious that the main point which we have been developing by the foregoing lengthy presentation of facts is that **the government of the United States is principally, if not solely, responsible** for the bankruptcy of all the railways for which the Interstate Commerce Commission (or its examiners) has proposed reorganizations which would result in wholesale permanent destruction of railroad securities. It was the Commission, a government body, and the government's Railroad Administration, whose policies caused the railroads' margin of profit and financial

One Presidential Candidate Who Knows from Experience the Only Way to Improve the Welfare of the Working Man

"I stand for every one of the social gains that labor has made. . . . An Administration that wants to do something for labor must go much further than minimum guarantees. Such an Administration, while protecting labor's rights, must make jobs and jobs and jobs. . . . The reason I am undertaking this campaign is because I want every man and woman in this country to find a job if he or she wants one. . . .

"Now what makes a job? . . . Business makes jobs—little business, big business, corporations, partnerships and small companies. Under our system, if we are going to have jobs we must have employers. It is not enough that the present employers should hire more men—although that is very important. There must be new employers every day. If we are to give our workers a chance there ought to be about 200,000 new enterprises founded every year. . . .

"Today, we have even fewer businesses per thousand of population than we had in 1929. Measured by the standard of our previous growth, we are short about 700,000 enterprises—that is, we are short about 700,000 employers. Nowadays it is about as hard to start a new business as

it is to rob a bank—and the risks of going to jail are about as great in both cases. . . .

"Factories are really tools for the workers to use—tools that enormously increase their earning power. But you will find your factory expensive to build. . . . You will find that you have to invest about \$4,000 for every man you employ. . . . It takes about \$4,000 to make one job. . . . Neither you nor anybody else will put up that \$4,000 unless there is some chance of making a profit on it. . . . Under the New Deal the employer who puts up money to make a profit has been in the doghouse. Government officials have encouraged the belief that he is a kind of conspirator against society—an exploiter of the workers.

"Profits have come to be regarded, not as the legitimate reward of enterprise, but as a kind of tax laid upon society by privileged men. If you really believe all that bunk, then you ought to change our system so that we can all go to work for the State. Because, so long as we keep our system of private enterprise, the employer will not put up \$4,000 for your job unless he can make a profit on it. . . ."

From Wendell Willkie's speech at Seattle.

safety steadily to narrow for twenty years before this depression. The federal government has been principally responsible for unequal regulation of the railways and their competitors, and largely responsible for the subsidization of their competitors. The policies of the New Deal administration of the federal government have been responsible for the fact that the recovery of general business that began in the latter part of 1932 did not continue and carry it to new high levels throughout the last five years, and that the railroads have not benefited by what would have been their share of the resulting much larger passenger and freight traffic.

The New Deal administration helped the labor unions force upon the railways the wage advances made in 1937, helped prevent any reduction of wages during the "recession" in 1938, and has made the increases in taxes as a result of which they are higher now in proportion to railway gross earnings than ever before. And now it is the Interstate Commerce Commission, a branch of the government, which states with an inadequacy constituting reckless inaccuracy the reasons for the financial downfall of so many big systems and causes adoption by a federal court of a reorganization plan destroying all the existing stock of the Chicago & North Western—while, with a hypocrisy that would have made Dickens' star hypocrite, Mr. Chadband, die with envy, it expresses itself as "deeply sympathetic" with the stockholders whose stock it has been for thirty years, and still is, so unremittingly and ably helping to destroy. If there were a code of ethics for governments or their officials the captious moralist might well express a wish that the virtue of many of these government people would become as real and honest as it is ostentatiously unctuous and self-interested.

Effect on Railways Not Now Bankrupt

We have intimated that what is happening and threatening to happen to these bankrupt railroads is not attracting enough attention from business men and from the security owners and managers of other railroads. Does the public accept the progressive view of the Interstate Commerce Commission—so different from the one it expressed in its annual report in 1931—that the present depression will be eternal, and that consequently the earnings made by railways within recent years are a reasonable basis for their future capitalization? If not,—if, on the contrary, the public believes business will some time greatly improve and traffic demands on the railways greatly increase—does it believe that adequate railway investment and service will be best assured by the most comprehensive possible destruction of existing railway securities and confiscation of the property they constitute? Do men in other lines of business believe that the process of wholesale confiscation of the properties of railway security owners now being consummated, often with their help, cannot be applied to other industries, and, therefore, does not constitute a dangerous precedent? If so, they are living in an ass's paradise.

And do managements of railways competing with those now being reorganized, or threatened with reorganization, see no threat to their properties in these reorganizations? If so, they had better open their eyes. In the Chicago Great Western case the Commission's bureau of accounts has disregarded both the road's actual investment and the Commission's valuation of it, and demanded that its property investment account be written down from 143 to only 63 million dollars to make it correspond with its new capitalization. Each of these bankrupt roads parallels and competes with other roads that are not bankrupt—now. But heretofore in all rate and wage controversies the book investment (or capitalization) and the fixed charges of the railways have been introduced to indicate what rates they could afford to accept or wages they could afford to pay. If this process continues to be followed, as no doubt it will be, then each and every reduction now made in **any** railway's capitalization, investment account or fixed charges will serve in future as an argument for lower rates or higher wages for all the railways in its group or in the country.

Confiscation Does Not Stimulate New Investment

The North Western's present fixed charges, for example, are 16½ million dollars; but under the Commission's plan its fixed charges will be only 3⅓ million dollars. Is anybody in the railroad industry simple-minded enough to believe that this 80 per cent reduction in the North Western's fixed charges, and similar reductions of the fixed charges of other roads in all parts of the country, will not in due course be used by shippers to show that they can bear lower rates, by labor leaders to show they can bear higher wages, or in both ways—and that therefore all roads should have their rates reduced or wages increased? How long will it take, under the new competitive conditions, to bankrupt all the railways not now bankrupt if the various branches of the government are going to pursue in future the same policies as heretofore?

And what assurance have the recipients of new securities of bankrupt railways—principally "institutional holders" who in many cases are ably helping destroy old securities that happen to be owned by other persons—that **their** new securities will not be rapidly wiped out by the same process as the old securities? What are they going to do to prevent it? Probably nothing—which is about all that most "institutional" holders of railroad securities ever have done.

It is no light thing for commissions and courts to wipe out many millions of dollars of the securities of any industry—especially when it is so easily demonstrable that this is merely the consummation of a long process of confiscation for which the government, of which commissions and courts are a part, is almost solely responsible. Confiscation always is intended to benefit some at the expense of others; but usually no one gains what others lose, because confiscation so shocks the conscience and confidence of mankind as

rapidly as to dry up the springs of capital. Remarkably enough, however, the wholesale confiscation of railway securities now under way seems to be attracting almost no attention. Have even business men become so callous regarding government policies continuance of which would pull down the economic edifice of any nation, however rich, that they no longer pay any attention to their effects? If so, small wonder that people

with less than average incomes and economic intelligence believe that they can best promote their welfare and security by supporting politicians who for seven years have carried out policies which, if continued, will vindicate the Interstate Commerce Commission's conclusion that the depression will be eternal and that railways should be financially reorganized accordingly.

Putting Incentives Into the Rate Structure

Railroad men do not need to be reminded with what authority of long experience and brilliant professional attainments Elmer A. Smith of the Illinois Central speaks on traffic and transportation questions. The following is a quotation from a letter he recently wrote:

"It is my judgment that the fundamental problem of the railroads is to secure a substantial part of traffic of this country, now moving for long distances, that in the interest of the public and the interest of efficiency and economy of operation should move by rail. A comparison of the production indices with railroad indices is disheartening and shows that the traffic is moving, but that, because, among other reasons, of our rate adjustments, the railroads are not sharing in the movement as they should.

"There passed over my desk recently a statement of the revenues and expenses of intercity motor carriers for the first quarter of 1940 as compared with the first quarter of 1939. These carriers increased their revenues for the first quarter of 1940 by 15.6 per cent for the country as a whole. In the Southern Region it was 17.9 per cent, and in the Western Region it was 13.8 per cent. Surely this statement shows the extent to which the motor trucks are still increasing their traffic at the expense of rail traffic. Notwithstanding this increase in revenues, however, the *net operating revenues of the motor carriers decreased by 17.5 per cent*, and it did not appear to me that the trucks had a very wide margin of safety. This fact appears to show that much traffic now moving by truck could be more economically handled by rail.

"When we come to a comparison of rail and barge traffic, the results are wholly depressing. A statement released recently by the Commission shows that the Federal Barge Lines and the American Barge Line Company during the second quarter of 1940 increased their revenues and the tonnage handled over the second quarter of 1939 by from 54 per cent to 57 per cent. The Mississippi Valley Barge Line Company had a slight decrease, but the increase for all three barge lines was about 37 per cent in revenues. Then we wonder why our traffic in this territory remains more or less stationary.

"The shippers as a whole are paying a materially higher level of freight rates than they would otherwise have to pay were it not for the enormous and continuously growing duplication of transportation facilities. Every ton of traffic diverted from the railroads, that should in the public interest move by rail, increases the unit cost of the traffic that remains on the rails. I have yet to find anyone who has suggested that the barge lines and the trucks, either singly or collectively, can supplant railroad service. This means that the shippers, either through the payment of charges or through the payment of taxes, have got to support railroad service. Very few have had the wisdom to see just where all this is leading and to realize that in the end it must mean higher rates on the railroads for what traffic remains on the rails, and high rates via the motor trucks to enable the motor trucks to break even on the traffic moving for long distances and which should move by rail.

"I sometimes wonder whether the thoughtful students of

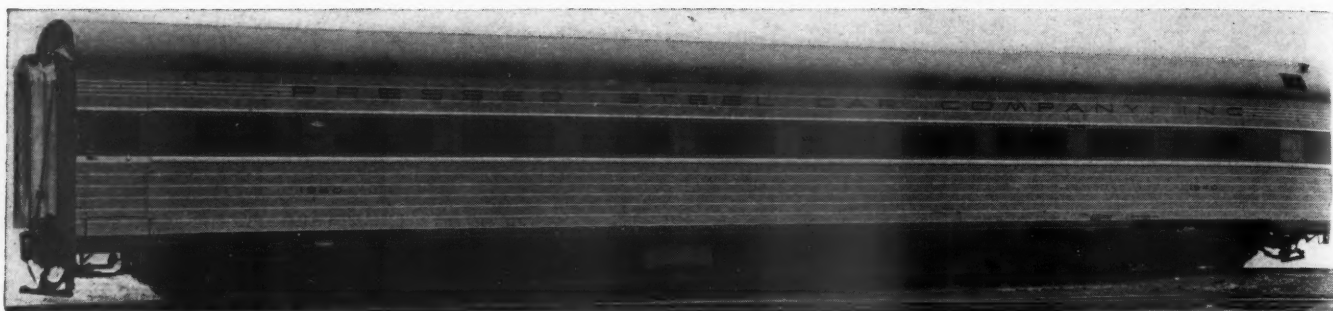
transportation in this country really understand what is going on at the present time, and the inevitability in the end of paying for this duplication of facilities, either through higher rates for the transportation of freight by the agency that must continue to be the backbone of the national transportation system, or paying these higher rates through the medium of increased taxes.

"The problem of the railroads today is a problem of gross revenues. The railroads seem to have great difficulty in meeting it. I realize that there are many aspects of the problem as, for example, the ever-increasing expansion of barge transportation, the cost of a very substantial part of which is borne by the taxpayers. What can the railroads do to meet rates maintained by an agency of transportation, a very substantial part of whose costs are paid for by the government, or to meet the competition of private transportation agencies a very large part of whose costs are paid for by the government? Have you any suggestions?"

The answer to the questions raised by Mr. Smith hinges greatly on the personnel chosen by President Roosevelt for the transportation board, called for in the recently-enacted Transportation Act. Big men, big results. Small-timers, then "just another report." The transportation industry can do its part, not only by insisting that men of sufficient integrity to "call them as they see them" are named to this board—but also by helping the board in its studies, and, if these studies promise to be really serious and comprehensive, preparing to give general support to the conclusions when they are announced.

The other part of the answer to Mr. Smith's questions is that the railroads should lose no more time in modernizing their freight rate structure to reflect the cost advantages over their competitors which the railroads *already* enjoy. Cutting out subsidies to competitors is no solution to the railroads' gross revenue problem unless the railroads *make their superior economy a reality to shippers* in the form of rates more attractive than those of their rivals. There is a lot more that the railroads could do in this direction than they have yet done—without waiting for subsidies to their rivals to be discontinued.

When it becomes a regular thing for greater economy in transportation to be reflected in rates, probably then shippers will be greater friends of economy than they are now. Also, if greater economy will *automatically* mean rates which will put more traffic on the rails, probably the support of union labor for economy will be more enthusiastic than it often is now. **Bad conditions persist in transportation largely because incentives to removing them are lacking.** A modernized rate structure would provide such incentives throughout the transportation industry.



A Lightweight de Luxe Coach on Exhibit at the New York World's Fair

Pressed Steel Car Co. Shows de Luxe Passenger Coach

Gun-metal mirrors and rich upholstery are the outstanding features in the interior of lightweight car of high-tensile-steel construction

THE Pressed Steel Car Company has developed a de luxe passenger coach, now on exhibit at the New York World's Fair, in which several innovations of design and appointments combine to produce an unusually pleasing and attractive result. The interior appointments were designed in collaboration with Lurelle Guild, New York.

In designing this car a partially streamline effect was obtained by making the exterior surfaces as smooth as possible. The car is built of Cor-Ten steel and while it is generally of riveted construction, the center sills are welded to a steel buffer casting. The car has been designed to meet the present A. A. R. requirements as to strength. It more than met the required longitudinal compression-load test of not more than one-half to three-quarters inch vertical deflection with 800,000 lb. end load. It was subjected to 926,000 lb. with a vertical deflection of only 0.49 in. with no permanent set after the release of the pressure.

The Car Structure

The center sills consist of rolled A. A. R. Z-bar sections with a continuous weld in the center. The center sill is lower than usual, bringing it more in line with the buffing forces and resulting in a stronger structure. The bolster diaphragms, crossbearers, etc., are of pressed pan

shapes. The side posts are pressed U-shapes with rolled section side sills and side plates. The belt rail is covered with a molding to conceal the rivets. The floor consists of Keystone flooring with cork base cemented thereto on top of which Linotile flooring is applied. This floor is supported by longitudinal continuous steel floor stringers which in turn are supported by the cross mem-

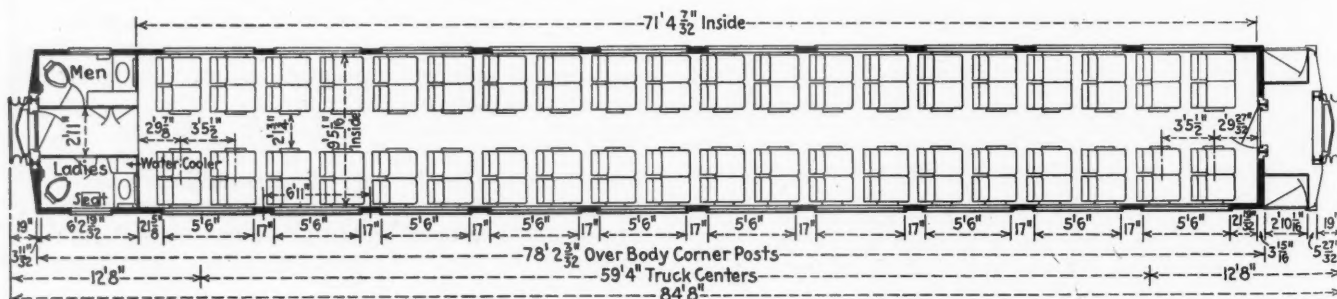
General Weights and Dimensions of Pressed Steel Passenger Car

Length over buffer face plate, ft.-in.	84- 8
Truck centers, ft.-in.	59- 4
Length inside of passenger compartment, ft.-in.	71- 4
Seating capacity	80
Width over side sheets, ft.-in.	9-11 ¹³ / ₁₆
Height from rail to top of roof, ft.-in.	13- 7 ¹ / ₄
Distance from rail to skirting, ft.-in.	2- 6 ⁷ / ₈
Distance from rail to top of floor, ft.-in.	4- 4
Lightweight, lb.	111,200

bers of the underframe. A false floor is placed below the floor stringers and the space between the false floor and the Keystone floor is insulated.

The roof is of the turtle-back type. The carlines supporting the roof sheets are partly of channel shape and partly of Z-bar pressed shape. The roof sheets are riveted to the carlines and the lap joints are made watertight by proper grade of Alumilastic cement instead of welding.

The car has a platform on one end with combination



The Pressed Steel Coach Seats 80 Passengers

folding steps and trap door. The steps fold underneath the platform when the trap door is closed and automatically drop down in position when the trap door is opened. The other end is blind construction. Here are located the two saloons and necessary compartments for the electric equipment and air-conditioning equipment. The ends are not at right angles to the longitudinal center line of the car, as in many coaches built today, but are sloped in order to permit necessary clearance should it be desirable to install outside folding diaphragms instead of the flexible rubber-type diaphragms now frequently used. The car is now equipped only with inside diaphragms, but provision has been made for the application of an outside diaphragm which, of course, would necessitate a different type of face plate.

The car is well insulated in the roof, side, ends, and floors, and also fitted with necessary rubber cushions between the truck and body to arrest sound and vibration traveling from the truck to the body of the car.

Interior Finish and Decoration

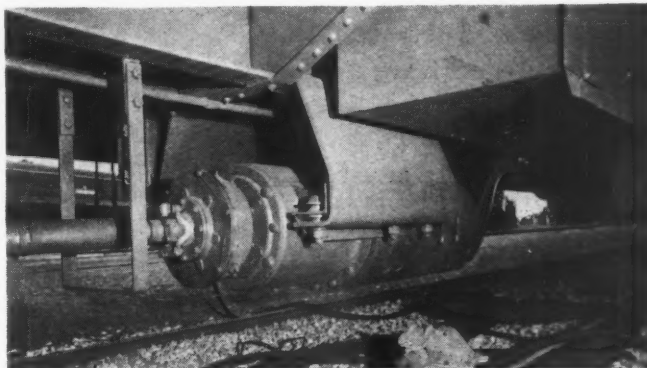
The inside finish is unusual in design. The distance from the car floor to top of the window sill is about 4 in. higher than usual in order to prevent passengers when traveling at high speed from looking down at the adjoining track. The greater width of the sash gives the passenger an exceptionally unobstructed view of the passing scenery.

The sash, consisting of two panels of glass, of which the inside is safety glass, are permanently fixed. The sash is in two parts; the part which holds the glass can be easily removed from the outside for replacement of glass in case of breakage. The inside of the window opening is covered with gun-metal-finish moldings both for the window sill as well as the curtain guides. The shape of the window sill is such as to prevent passengers from using it as a shelf, thereby protecting the finish.

The curtain material was especially woven in order to have a color scheme to match the interior finish of the car. The curtains are equipped with cable fixtures and especially designed gun-metal finish aluminum apron. This apron will prevent passengers from harming and handling the curtain material and the cable fixtures allow the passengers to open and close the curtain from any

position. This is particularly desirable since the width of the glass covers two seats.

The baggage rack is bone white, edged with aluminum, of the solid continuous type with the top covered with fluted aluminum sheets to allow easy cleaning. Brackets



The Safety Genemotor Is Suspended Under the Center Sills

at intervals prevent shifting of baggage. There are no lights in the rack.

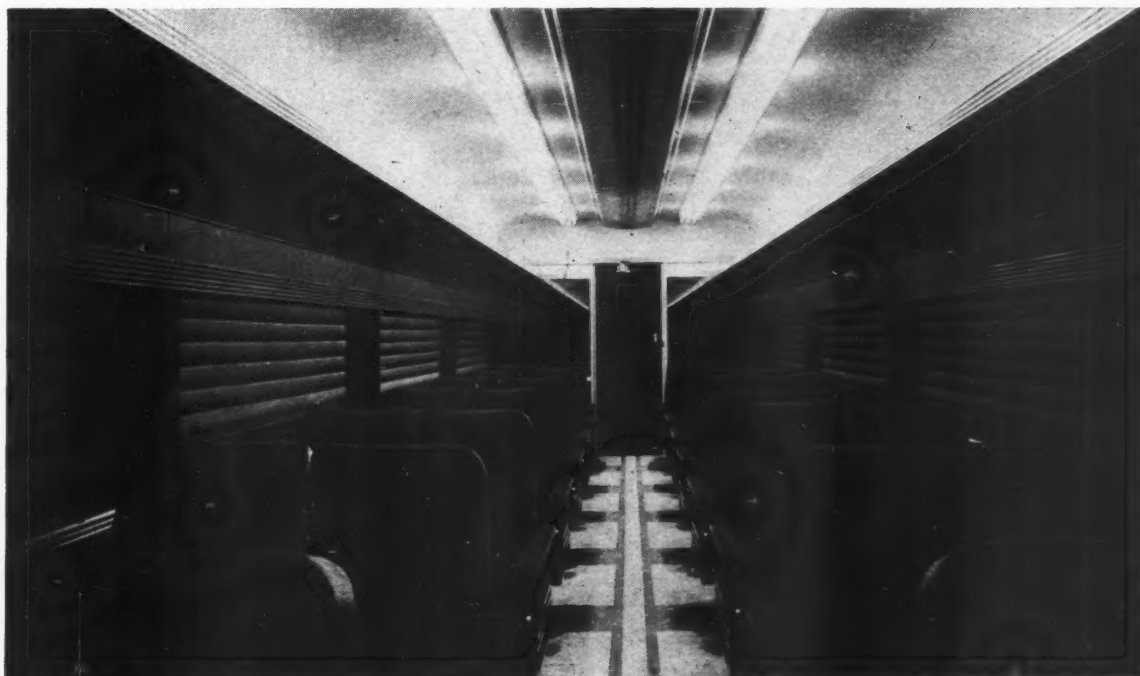
All moldings are of extruded aluminum with Alumilite finish.

All posts from window sill to bottom of window header, as well as the ends of the car, both at the platform end and the saloon end, are covered with gun-metal mirrors.

The mirrors are cemented to a backing which will prevent glass from shattering in case of breakage.

The heater pipes are covered with perforated polished stainless steel.

The seat fabric is mohair striped at the top to make the seats appear wider. The window shades pick up the color of the car—aluminum and green, in lateral stripes. The composition floor covering of black and cream tile is designed and styled so that the black marbled pattern comes at intervals coinciding with the seats. A touch of aluminum color is used between the windows and the baggage rack and in the vestibule. Beneath the windows, as well as on the doors, a supporting substantial



The Interior
of the Pressed
Steel Coach

color is used—the same soft green-blue of the upholstery. The ceiling is painted bone white.

The exterior of the car is finished in matched warm gray tones, the roof of a darker color with bands between the windows of the same tone. The side walls are striped with aluminum, and at top and bottom of the windows are repeated notes in aluminum stripes.

Seating Arrangement

All seats are of the revolving, reclining, sliding cushion type. They have double tilting footrests, which add to the comfort and do not obstruct the passage between seats. Except for a few stainless-steel moldings below the arm rest as a matter of protection of the covering, no metal is visible. The seats are covered with an especially woven upholstery material of a blue-green color; the arm rest and ends all are covered with the same upholstery material which produces a rich looking seat. The seats have spring backs, whereas the seat cushions are rubber.

Lighting and Air Conditioning

The lighting system consists of lensed glassware mounted one over each passenger seat in two rows down the ceiling. A continuous trough is imbedded in the light fixture above the ceiling and this trough is covered by plastic ribs which appear to be a continuation of the glass design. When lighted, the plastic ribs take on a glow from the light thrown back by the continuous trough imbedded in the ceiling. The effect of a continuous lighting system is, therefore, accomplished although the light sources are only 40 watts and located directly above the lenses. Readings taken on a 45-deg. plane 30 in. above the floor at the center of each seat at rated voltage show a variation of 8 to 10 foot candles.

Night lighting is furnished by blue bulbs in the trough located at points between fixtures. The magnifying lenses over each seat are so focused as to prevent glare on the passenger who looks forward or across the aisle and at the same time prevent shadow on his reading matter.

The glassware and plastics are all hinged with sealed edges to prevent dust infiltration.

Power for light and air conditioning is obtained from a 20-kw. Genemotor made by the Safety Car Heating &

Partial List of Materials and Equipment on the de Luxe Coach Built by the Pressed Steel Car Company

Steel	Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Truck frame	General Steel Castings Corp., Eddystone, Pa.
Truck springs	American Steel Foundries, Chicago
Upper buffer spring	Standard Railway Equipment Co., Chicago
Wheels	Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Axles	Standard Forgings Corp., Chicago
Couplers and yokes	National Malleable and Steel Castings Co., Cleveland, Ohio
Draft gear and locking center pin	W. H. Miner, Inc., Chicago
Roller bearings	American Steel Foundries, Chicago
Side bearings	A. Stucki Co., Pittsburgh, Pa.
Clasp brake, truck	American Steel Foundries, Chicago
Body brake equipment	Westinghouse Air Brake Co., Wilmerding, Pa.
Hand brake	National Brake Co., Buffalo, N. Y.
Steam-heat equipment	Vapor Car Heating Co., Inc., Chicago
Steam train-line connection	Barco Manufacturing Co., Chicago
Air conditioning	Frigidaire Div. General Motors Corp., Dayton, Ohio
Air-conditioning control panel ...	Vapor Car Heating Co., Inc., Chicago
Grilles	Tuttle & Bailey, Inc., New Britain, Conn.
Filters	Air-Maze Corporation, Cleveland, Ohio
Exhaust fans	Diehl Mfg. Co., Elizabethport, N. J.
Genemotor	Safety Car Heating & Lighting Co., New York
Generator drive	Supergear Drive Corporation, Chicago
Rubber pads	United States Rubber Co., New York
Storage batteries	Gould Storage Battery Corp., Depew, N. Y.
Standby power and battery charging receptacles	Pyle-National Co., Chicago
Lighting control panel	I-T-E Circuit Breaker Co., Philadelphia, Pa.
Insulation in floor	Johns-Manville Sales Corp., New York
Insulation in body	Union Asbestos & Rubber Co., Chicago
Trap doors and folding steps ...	The O. M. Edwards Co., Inc., Syracuse, N. Y.
Vestibule flooring; aluminum moldings	Aluminum Co. of America, Pittsburgh, Pa.
Vestibule diaphragms; windowsash	The Adams & Westlake Co., Elkhart, Ind.
Vestibule tail gates; doors	The Morton Mfg. Co., Chicago
Door open holder	Yale & Towne Mfg. Co., Stamford, Conn.
Flooring	Armstrong Cork Co., Lancaster, Pa.
Saloon flooring	Tuco Products Corp., New York
Seats	Coach & Car Equipment Corp., Chicago
Seat upholstery	L. C. Chase & Co., Inc., New York
Window curtains; curtain fixtures	The Adams & Westlake Co., Elkhart, Ind.
Lighting fixtures	Luminator, Inc., Chicago
Hardware; saloon fixtures; water cooler	Dayton Mfg. Co., Dayton, Ohio
Drinking-cup vendor	Dixie-Vortex Co., Chicago
Paper-towel vendors	Chatfield & Woods Sack Co., Cincinnati, Ohio
Fire extinguisher	Pyrene Mfg. Co., Newark, N. J.
Rubber glazing molding for tool and fire extinguisher	Hunter Sash Co., Inc., Flushing, L. I., N. Y.

Lighting Company, New Haven, Conn. It is driven from the car axle by a Super Gear drive supplied by the
(Continued on page 438)



The Seats Are Spacious and Upholstery on the Arm Rests and Ends Adds Richness to the Appearance of the Car

Freight Progress Issue Wins Shippers' Commendation

Enthusiastic shipper response from all parts of the country
greet's encyclopedia of service improvements

NO greater tribute to the importance and value of the May 25 number of the *Railway Age*—the Freight Progress Issue—could be made than the accompanying map which shows the geographical location of the hundreds of shippers from whom letters have been received in praise of the issue. These letters came from traffic managers of all sorts of industries, with a wide variety of shipping problems; from friends of the railways and from large users of competitive transportation. They have been coming in for more than three months and still continue to arrive. The wide cross-section of the shipping public reached by this issue included some 15,000 industrial executives and traffic managers, controlling the routing of more than 95 per cent of the total freight tonnage shipped in this country and Canada annually. Their replies might be termed as "the voice of the shipper" and, as such, are of importance to the railway field. Some praised railway service, some criticized certain phases of it, but all were in agreement that the Freight Progress Issue gave them a clearer picture of the magnitude of the improvement in railway freight service than they had before or could have obtained in any other way.

The reaction among railroaders has been equally gratifying. The issue is to be found in use as a work of reference in the offices of almost every railway executive in the country. So far—several months after the publication date—not a single complaint has been received as to omissions or inaccuracies in the listing of railway services, which attests to the completeness and accuracy with which the issue was prepared.

Shippers' Suggestions

The suggestions received from the shippers may be consolidated into a quotation from one of the letters: "What the shippers want from the railways is an extension of the types of service mentioned in your Freight Progress Issue. In other words, the necessary means for attracting traffic back to the rails are in effect, but their use is not universal on all lines as it should be to meet the shippers' needs."

The cross-section of shipper opinion developed through replies from the distribution of 25,000 copies of the Freight Progress Issue was illuminating. One of the most frequent criticisms of the railways was in regard to the cumbersome and slow processes of rate-making. The shippers express themselves as being not so much dissatisfied with the rates themselves as with "the creaking and obsolete machinery" which it is necessary to use to change rates and classification.

Another frequent complaint was that the railways' merchandising and sales methods are not adequate. From the letters received, it would appear that the new services are not adequately advertised among the shippers. Mere personal calls by traffic solicitors who are not always properly equipped to see that shippers get the in-



formation they should have are not enough. They should be supplemented, according to the shippers, by additional devices designed to broadcast information regarding new services to all interested shippers. Several shippers mentioned the value in this and other respects of the regional advisory boards, for which there was no criticism but much praise.

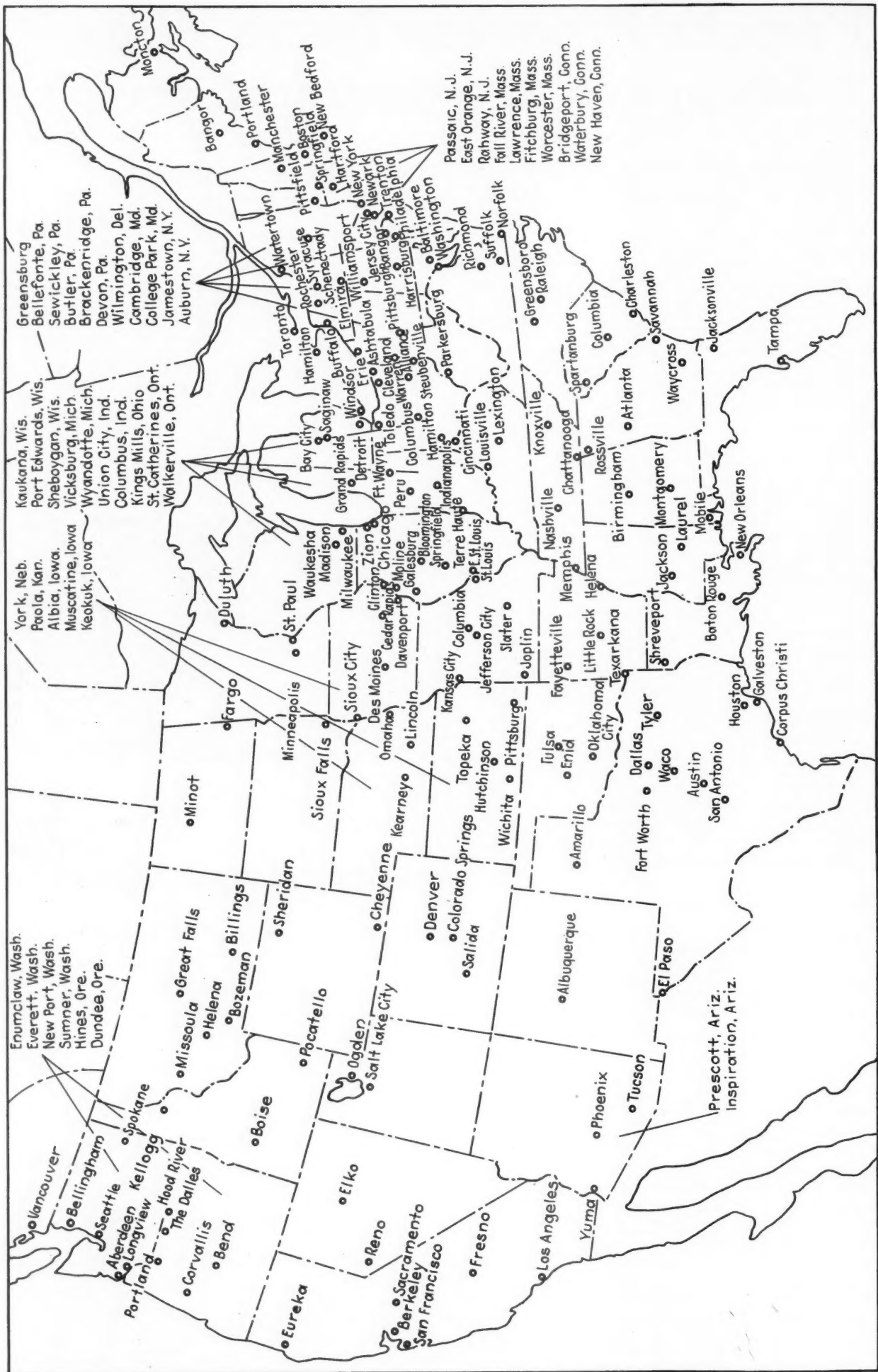
The general tone of the letters was extremely favorable to the railways and commended the new services as outlined in the issue. It indicated that most shippers are desirous of favoring the railways, if given an opportunity to do so, and if railway transportation service is brought to their attention and sold to them by modern methods, backed by outstanding service.

Excerpts from Letters

The following are typical expressions, selected from among the hundreds of letters, indicative of the shippers' reactions:

Portland, Ore.

One thing that impresses me particularly is the portrayal in this issue of the colossal investments that the



Map Showing Widespread Origin of Letters Received from Industrial Traffic Managers Throughout the Country Praising Railway Service and the Manner in Which it Was Outlined in the Freight Progress Issue

railway companies have made for the sole purpose of making living easier and more useful for all the people of this vast country. The reader would have to be very thoughtless indeed not to realize that being unfair to the railroads in any particular is a very shortsighted and obstructive policy.

Tyler, Texas.

We are much interested in the future of the railways and the progressive articles in this issue will have much bearing on the progress the railways are able to make in the next few years.

St. Louis, Mo.

This splendid issue tersely condenses a record of achievement which, in my opinion, is one of the bright spots in the history of American railroading.

Fargo, N. D.

I am pleased to note that your excellent publication gives due credit to the Shippers' Boards which have done a great deal toward cementing better feeling between the shippers and the railways which serve them.

Topeka, Kan.

I have a much better appreciation than before of the tremendous headway the railroads have made in recent years in serving the public.

Berkeley, Calif.

An excellent issue, making one realize more than ever

Warren, Ohio.

The magnitude and efficiency of the railroad industry can only be visualized through information such as is available in this issue of the *Railway Age*.

Cedar Rapids, Iowa.

I had thought I was fairly familiar with the progress that has been made by the carriers, but I confess that I am much more enlightened after reading this issue.

Toronto, Ont.

The issue is a masterpiece in every respect and you are to be congratulated in getting before the public such a comprehensive review of the advancement made in American and Canadian rail transportation which is still the life-stream of the nation and in these difficult and dangerous days will be called on more and more to aid in the preservation of our lives and liberties.

Norfolk, Va.

We are much interested in moving everything possible by rail and this issue gives us additional arguments.

Advertising Receives Attention

In addition to commenting on the editorial material, a large number of executives and traffic managers

Part of the File of Several Hundred Letters Received from Shippers Everywhere



that the success of business depends on the success of the railways.

Chicago.

The information contained is invaluable and I shall use it to good advantage.

Colorado Springs, Colo.

This is interesting reading and indicates to me that at long last the carriers have awakened to the competitive necessity inherent in the transportation business.

Fort Wayne, Ind.

There is a great deal of interest in the issue to rail investors as well as shippers.

Kearney, Nebr.

I am amazed at the remarkable railway progress, as indicated in your publication.

Raleigh, N. C.

This fine-appearing publication gives information of much importance to all traffic managers.

Fayetteville, Ark.

This issue clearly explains to me why the railways are again gaining headway.

showed that they had made an equally intensive study of the advertising pages, both as to the railways and the railway supply companies. A selection of these comments follows:

St. Catharines, Ont.

The articles and the advertisements are of great assistance in attaining an insight into the many railroad improvements of recent years.

Aberdeen, Wash.

I wish to compliment you on the presentation of the various articles and particularly on the advertising section.

Cincinnati, O.

You are to be congratulated for the remarkable advertisements included. Every one should retain this issue as a reference book for the railroad transportation field.

Rochester, N. Y.

The advertising confirms my opinion that considerable credit for railroad progress must also go to the industries supplying the railroads for their research and enter-

prise in bringing out new materials, devices and equipment.

Philadelphia, Pa.

The advertising in this issue is most attractive and is worth while reading.

Eureka, Calif.

As a student of both transportation and advertising, I examined this splendid issue with much interest.

Chicago, Ill.

Evidently, from the amount of advertising, the supply companies realize the job you are doing for them.

Raleigh, N. C.

This publication is enlightening from the standpoint of advertising as well as editorial matter.

Pittsburgh, Pa.

The advertisements were as absorbing to me as the editorial section.

The Dalles, Ore.

One of the outstanding features to the writer is the elaborate showing of railroad and railroad supply advertisers, which is proof of the vast resources represented. Not alone the multitudinous articles used in connection with the items shown are illuminating, but also the labor investment behind the production depicted. The railway and supply industries have certainly come a long way.

Atlanta, Ga.

The advertising pages are prepared in the most attractive form I have seen and when assembled collectively constitute a true work of art.

Los Angeles.

The advertisements are most attractive as well as educational and I found much interest in reviewing the progress made by the manufacturers of railroad equipment.

Salida, Colo.

This is a wonderful issue not only for the railway progress it portrays but also for the great volume of advertising that you carry.

Lincoln, Nebr.

We wish to compliment you not only on the editorial

matter but also on the very fine display of advertising. *Cleveland, Ohio.*

The editorial matter and the display of advertising both combine to make the book a sound and meaty summary of railroad progress in a most interesting and readable way.

Pressed Steel Car Shows de Luxe Passenger Coach

(Continued from page 434)

Super Gear Corp., Chicago. The Genemotor may also be operated from 3-phase, 220-volt standby power. When the Genemotor is not operated or is running at low speeds, power is taken from a Gould KALD-35-R, 32-volt storage battery. It has an eight-hour rating of 1,000 amp. hr. and is mounted in two battery boxes on opposite sides under the car. Receptacles are available on both sides of the car for receiving d.c. charging current from yard or station outlets.

Air-conditioning equipment was supplied by the Frigidaire Division, General Motors Corp., Dayton, Ohio, and is equipped with the correlative control of Vapor Car Heating Co., Chicago. This company also supplied the steam-heating equipment. The exhaust fans were supplied by the Diehl Manufacturing Company.

The lights in the car are arranged on eight circuits. Four circuits feed alternate lights on each side of the car, two others supply the night lights, and the remaining two are used for washroom and passenger lights and vestibule lights at opposite ends of the car.

The car is equipped with General Steel castings cast-steel trucks with bolster stabilizers and shock absorbers. Simplex Unit Cylinder clasp brakes, with two brake cylinders, are mounted on each truck. The wheels are fitted with ASF roller-bearing units.

These cars are equipped with Westinghouse Air Brake Company's HSC brake with D-22-A passenger control valve. The coupler equipment is the National tight-lock type, and the draft gears, Miner A-5-XB. Barco steam train-line connectors are applied.

* * * *



Lots of People Have Never Seen the Inside of a Modern Box Car—At Least Not Legally. But There Are Plenty of Opportunities to Do so at New York World's Fair

Hale Holden Passes at 71

Retired as Southern Pacific chairman last year after 32 years of railroad service; was Burlington president up to 1929



Hale Holden

HALE HOLDEN, who retired as chairman of the Southern Pacific in July, 1939, died on September 23 in Doctors' Hospital, New York, after a brief illness. He was 71 years old.

Mr. Holden was born in Kansas City, Mo., on August 11, 1869, and was graduated from Williams College in 1890 and from the Harvard Law School in 1893. Immediately thereafter he began the practice of law in Kansas City, Mo., and after a number of years was admitted as a partner in the firm of Warner, Dean, McLeod & Holden. Inasmuch as this firm were attorneys for the Chicago, Burlington & Quincy, Mr. Holden had much to do with railroad problems and practices and in July, 1907, entered the railroad business directly as general attorney for the Burlington, with headquarters at Chicago. During the three-year period that he served in this capacity he represented not only his own road but other carriers as well in some of the most important cases in I. C. C. history, including the Missouri River rate case and the Pacific Coast Lumber rate case. He likewise was a dominant figure in several important court contests, including the notable Minnesota rate case, one of the most important ever decided by the Supreme Court of the United States.

The skill with which Mr. Holden represented the so-called Hill lines in this litigation attracted the attention of James J. Hill (then chairman of the board of the Great Northern), who recommended his advancement. Thereupon Mr. Holden was named assistant to the president of the Burlington in January, 1910, and in November, 1912, was elected vice-president and a director. Two years later, in August, 1914, he was elected president of the Burlington and its affiliated Colorado & Southern.

During his incumbency in these positions Mr. Holden was active on a nation-wide scale in labor matters, war-time operation and consolidation. In August, 1916, when the carriers were threatened with a nation-wide strike over the "basic 8-hour day" controversy with train-service employees, he was chosen to preside over the

conference of railroad presidents in Washington, D. C., and to serve as chairman of the committee of executives who presented the position of the carriers to President Wilson. When the United States entered the World War in the spring of 1917 Mr. Holden was selected as one of five members of the executive committee of the Railroad War Board.

When government operation began in the beginning of 1918, he was invited by Director-general of Railroads William G. McAdoo to head the operating organization of the United States Railroad Administration, but declined. In June, 1918, however, he resigned temporarily as president of the Burlington and Colorado & Southern to become regional director of the Central Western region of the Railroad Administration which position he held until February 15, 1920, when he resumed his position as chief executive of the Burlington system. In 1923 Mr. Holden added a strong voice to the discussion which marked the attempt by the I. C. C. to carry out Congress' mandate to unify the railroads of the country into a limited number of systems of comparable strength. His chief contribution was the proposal that all the Western carriers be consolidated into four great systems—the Burlington, Union Pacific, Santa Fe and Southern Pacific—each to be approximately 30,000 miles in length and to have access to Gulf and Pacific coasts. An important item in this plan was the consolidation of the Burlington, Colorado & Southern, Great Northern and Northern Pacific into a unified operating organization. Mr. Holden also served as chairman of the Executive committee of the Association of Railway Executives from December, 1922, to December, 1924.

On January 1, 1929, Mr. Holden left the Burlington to become chairman of the Executive committee of the Southern Pacific, in which post he exercised general control over all business of the company, while the chairman of the board handled matters pertaining to consolidations and finance. At this time the executive con-

(Continued on page 448)

Roadmasters Hold Largest Convention Since 1929

Abstracts of two addresses and three additional reports presented at the fifty-fifth annual meeting of their association

Part II

PART I of the report on the activities of the fifty-fifth annual convention of the Roadmasters' and Maintenance of Way Association, held in Chicago on September 10-12, appeared in the *Railway Age* of September 21, and included abstracts of the opening addresses, including one by C. E. Johnston, chairman, Western Association of Railway Executives; a paper by A. E. Perlman, engineer maintenance of way, Denver & Rio Grande Western, on It's Results That Count; and three committee reports, dealing with Slow Orders—Their use in the Light of Present-Day Operating Conditions; The Maintenance of Gage Under Today's Higher Speeds; and Welding—Its Uses in Track Work. It also included reference to the exhibit of track materials and equipment presented by the Track Supply Association in conjunction with the convention.

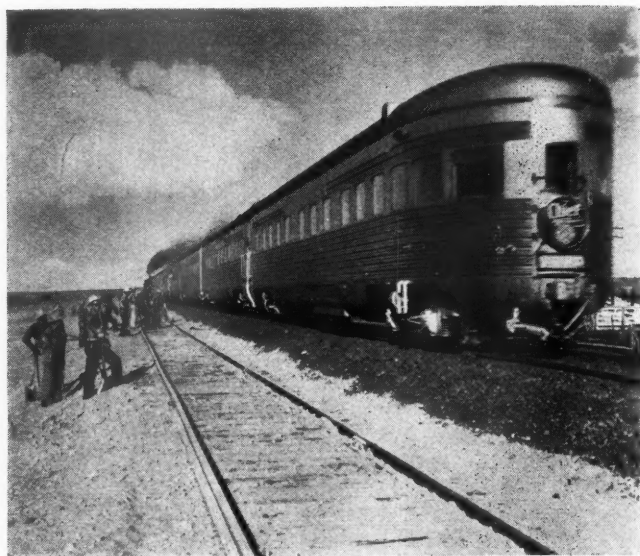
Other features of the convention, of which abstracts are presented on this and following pages, include an address by H. R. Clarke, engineer maintenance of way, Chicago, Burlington & Quincy, on Renewing 50,000,000 Ties a Year; a paper by C. H. R. Howe, cost engineer, Chesapeake & Ohio, on The Simplification of Track Work; and committee reports on the three following subjects: The Effect of Weight of Rail on Track Maintenance; Handling Snow and Ice—Organization, Equipment and Methods; and Methods and Equipment Best Suited for Ditching and Bank Widening. An abstract of a paper on Making Work Equipment Work, by J. G. Hartley, assistant engineer, Pennsylvania, prepared for presentation at the convention, and of an address on this same subject by F. H. Rothe, assistant engineer, Pennsylvania, presented in the absence of Mr. Hartley, will appear in a subsequent issue.

Renewing 50,000,000 Ties a Year

By H. R. Clarke*

Because of the large expenditure involved, and the need and possibility of reducing expense, the subject of tie renewals requires continued study, even at the risk of becoming tiresome. In addition to the cost of the ties themselves, the labor of renewing them has required a substantial portion of the time of our track forces for the last 100 years, and the combined cost of

* Engineer Maintenance of Way, Chicago, Burlington & Quincy, Chicago.



Modern High-Speed Trains Have Increased the Problems of the Track Forces

these two items, ties and the labor of handling them, has been and is the largest single account in our maintenance of way expenses.

It cannot be said that no progress has been made in the economy of tie renewals. Very definitely, there has been progress, but it has been the result of better specifications for the purchase of ties and closer adherence to them, greater care in seasoning and handling, and, most of all, the development of and improvements in the art of timber preservation and the protection of ties from mechanical wear and damage. So far as the methods followed, the tools used, and the organization of forces employed in the actual renewal of ties, the change has not been marked and progress has not been great. It is in these latter things that we must now move forward, as a further reduction in the cost of handling our maintenance of way work is imperative.

In a study of the subject we are discussing, the logical first consideration is—how we shall determine the ties that are to be renewed. The first responsibility for this should rest with the section foreman, who should mark the ties that he thinks should be renewed the following season. The track supervisor, roadmaster, division engineer, or other maintenance of way supervisory officer, should then make such check on each section as will enable him to know that, in general at least, the ties marked by the foreman should be renewed in order to maintain the established track standard. The number of ties determined in this way will be used by the system maintenance officer in making up his tie program or budget.

In order to determine which ties are to come out, the foreman in charge of the work must know the basis on which renewals are being made—that is, annually or at longer intervals, and he must be familiar with the traffic demands on the line as to speed, axle loads and tonnage density, and know the standard of maintenance

established. It is the responsibility of the roadmaster or other designated supervisory officer to see that the foreman is thoroughly informed on these matters.

It is generally agreed, I believe, that when track is being surfaced out-of-face, ties should be renewed to the extent that no renewals will be required during the following year. The cost of digging in ties, compared with the cost of renewing them when track is being raised, is so much greater that the loss of a year's tie life is justified. There is the further advantage in this that the new ties will at once carry their share of the load if put in when the track is being surfaced, whereas it is almost impossible to tamp a tie, dug in, in such a way that it carries its full load when first renewed. Some maintenance officers believe that when surfacing, renewals should be made to such an extent that no further renewals will have to be made for a period of even longer than a year. I hesitate to concur in this opinion, and no such standard has been set up on the Burlington, as it might result in the misuse of ties.

There is a greater difference of opinion as to the frequency of making renewals when ties are dug in. On some roads it is the practice to renew ties on part of a section, say one-half every other year, and in a few cases renewals are made at three-year intervals. I prefer annual renewals, that is, working over the entire section or line each year, replacing such ties as should come out. I believe this method results in the longest tie life and consequently the greatest economy in the use of ties, and also that it produces more uniform tie and track conditions.

In any case, and regardless of the renewal basis, it is a decided mistake on high-speed, heavy-traffic lines to continue the practice that was once generally followed, of making what might be called partial renewals; that is, putting in one new tie and leaving a decidedly bad tie on one or perhaps both sides of it.

For making tie renewals by digging them in, there is a difference of opinion as to the organization and methods that should be used. If renewals are light, not more than 75 to the mile, and comparatively scattered, the work should be done by section forces. When renewals are heavy, a special tie gang is justified, this gang to move from place to place as needed to supplement the work of the section forces.

Early in my remarks I suggested that the progress that has been made in the development of new tools has not been great. I think this statement is correct, but it does not follow, however, that no effort has been made. For at least 20 years, and probably longer, so-called tie pullers have been offered to the railways from time to time. During the last two or three years there has been increased interest in such a device. There are now at least four tie pullers being offered by manufacturers. All of these devices will pull a tie out of track with the necessity of removing little, if any, ballast in advance. Some operate more efficiently than others, but, unfortunately, so far all have one defect in common. Their use does not greatly reduce the cost of renewing ties, if at all. I am on record as having said many years ago that such a device was needed, and that when developed the railroads would use it, if they found that by so doing economies could be effected.

Another tool developed recently which is used to some extent in removing ties, and which does reduce the cost of the work, is the tie saw. It is not used extensively as yet and has certain objections, including high first cost. Still another machine that has been worked out with a great deal of care and detail is one used to cut down the tie bed to the desired depth after the old tie has been removed. It operates quite well in some kinds of ballast, but it is doubtful if it would be effective in

crushed rock, slag or heavy gravel. It is being used quite extensively by the road on which it was developed, but has not come into general use. Like the saw mentioned previously, it is open to the objection that it cannot be used economically with a small force such as the usual section gang.

Repeating the statement made previously, we must find more efficient and, consequently, more economical methods of handling all classes of maintenance of way work. Progress has been made in the development of equipment to aid us in this as in almost everything else. Rail-laying gangs are nearly fully mechanized. Tamping equipment of many kinds and sizes is in general use. Chemical weed killers or weed burners have largely supplanted hand weeding, and power weed mowers are used extensively. It may be more difficult to solve the problem of tie renewals, but it will be done. Perhaps the solution is in the development of two devices, one for use with larger gangs and another for section forces. The first might be somewhat expensive in both first cost and in maintenance, but for section use the machine must be simple, almost fool-proof, and low in cost. In either case, to be accepted and used, the final result must be a reduced cost, all factors considered, when the job of tie renewals is completed.

Discussion

In answer to a question, Mr. Clarke stated that when resurfacing track, ties that will last two years can be taken out without loss, because the cost of spot renewals later will equal the value remaining in the ties. He also said, in answer to another question, that while the advantages of 9-ft. ties, compared with ties 8 ft. 6 in. long, have not been demonstrated in track, because of the fact that their use is only beginning, the Atchison, Topeka & Santa Fe became convinced that their use is warranted on at least its main lines after a thorough study of the subject. C. W. Baldrige (A. T. & S. F.) stated that sawn ties 9 ft. long cost no more than similar ties 8 ft. 6 in. long, but that the cost of the longer hewn ties is slightly more.

The Effect of Weight of Rail on Track Maintenance

The committee reporting on The Effect of Weight of Rail on Track Maintenance, which was headed by I. H. Schram, engineer maintenance of way of the Eastern district of the Erie, summarized the results of a number of previous studies relating to the most economical weight of rail for given traffic conditions, and then submitted much additional data, all of which supported the conclusion that not only are large economies possible through the use of the heavier rail sections in tracks carrying heavy traffic, but also that such sections are becoming essential to the smooth-riding and safety of present-day high-speed freight and passenger trains. At one point in its report, the committee reproduced a table prepared by the Committee on Economics of Railway Location and Operation of the American Railway Engineering Association and presented in its report to that association in 1939, which showed that section man-hours per million gross ton miles per equated mile definitely increase as the rail weight decreases. At another point it presented a second table prepared by that committee from the records of 93 railways, as reported to the Interstate Commerce Commission, which indicated conclusively that as the weight of rail decreases, the ability to decrease labor costs also decreases.

Citing specific examples of the effect of heavier rail

on man-hours required for maintenance work, the committee presented the following data relative to a 20.35-mile section of heavy-duty track on the Erie, between Port Jervis, N. Y., and Lackawaxen, Pa.:

Year	Gross tons eastbound	Man-hours
1929	25,281,067	87,267
1930	23,105,020	88,623
1931	21,443,808	80,653
1932	17,967,233	60,128
1933	17,057,938	56,102
1934	18,438,132	56,398
1935	17,246,382	65,611
1936	17,157,947	55,198
1937	17,669,866	54,924
1938	16,438,104	52,448

During the period of time represented in this table, the committee pointed out that the rail section was changed from 110 lb. to 130 lb. or 131 lb.

Commenting further upon the changed situation on this section of track, as reflected in the table and other records, the committee said:

"In comparing the first five years with the last five years, it will be noted that there has been a reduction of 23.66 per cent in man-hours. In addition, it should be pointed out that the rail renewals have decreased about 50 per cent and that tie renewals have decreased from 205 to 80 per mile. The section of railroad in question is 73.4 per cent curves, of which 31.2 per cent are 5 deg. or heavier. In the 10-yr. period represented in the table, this track was completely equipped with curve lubricators, which, no doubt, added greatly to the life of the rail, and all tie renewals during the period in question were made with treated ties."

At another point in its report, the committee presented data submitted by N. V. Fehn, supervisor, Louisville & Nashville, which indicated that for a specific section of track carrying 25,000,000 gross tons per year, where 131-lb. rail is replacing 100-lb. rail, the saving in labor and material per mile per year, including all important factors, is \$126.30.

At still another point it presented the following data submitted by J. M. Farrin, assistant engineer, Illinois Central, which shows the labor cost per million gross ton miles per mile for track laid with 85, 100 and 127-lb. rail, both as taken from charts prepared by Mr. Farrin and as determined by actual cost records kept for specific test sections of track:

Weight of Rail	Age Years	Length of test section in miles	Traffic Density in tons per year	Labor cost per million gross ton miles per mile	
				Actual	From chart
85 lb.	16	35	4,597,000	\$65	\$65
100 lb.	9	25	4,156,000	44	50
127 lb.	6	35	4,597,000	34	37

Continuing its report, the committee quoted in some detail from the testimony presented by the late Robert Faries, assistant chief engineer maintenance, of the Pennsylvania, before the Wage and Hour division of the department of labor, earlier this year, which showed large savings in annual expenditures for maintenance for 130-lb. rail over 100-lb. rail in track carrying as much as 16,500,000 gross tons per mile, these ranging from \$95 per mile in the case of a 30-cent wage rate, to \$113 per mile where the wage rate is 35 cents, and \$133 a mile where the wage rate is 40 cents.

Commenting upon the various factors in connection with the use of heavier rail which result in reduced maintenance cost, the committee cited the longer service life of the heavier sections, with reduced annual charges for renewals; the greater stiffness and load-distributing characteristics of these sections; the deeper fishing space which they afford and, therefore, stronger joints; and the larger tie plates called for and used. It also pointed to the increased life of ballast, less frequent need for

cleaning ballast, less difficulty with minor soft spots in the roadbed, and increased life of ties in track laid with heavier rail—all brought about to a large extent as the result of the greater stiffness of the heavier sections, with their reduced wave action under traffic and their ability to distribute the wheel loads over a greater area.

Discussion

In the discussion that followed the presentation of this report, estimates of the reduction in the cost of routine surfacing of track where heavy rail replaces light rail ranged up to 90 per cent, with the general opinion that the normal reduction will range between 20 and 50 per cent, depending on the relative weights of the new and old rail. Considerable time was given to discussing the relative labor costs of laying heavy and light rail, with the conclusion that there should be some differential in this cost at any given wage level. One member estimated the difference at 12 man-hours per mile, in favor of 131-lb. rail, compared with 100-lb. rail.

The Simplification of Track Work

By C. H. R. Howe*

Fifteen years ago, if I, or any one else for that matter, had stated to you that it would be possible to reduce by nearly one-half the amount of work to be done, and still maintain good-riding track, you would have been skeptical, to say the least. Yet, in less than 15 years, many of the railways in the United States and Canada have actually reduced their track labor more than 40 per cent, and in the meantime have improved track conditions. If we are asked to explain this seeming paradox, the answer is not hard to find, for it is contained in the topic of this address—"Simplification of Track Work."

Now just what is meant by this expression? It should mean the elimination of non-essentials and lost motion, and the taking advantage of improvements in equipment and materials, and better organization. In short, it should mean to reduce the effort required to perform a given job.

In the solution of any problem of work simplification there are three steps that must be taken. First—we must have a thorough understanding of the details included in the operation in question, and a definite knowledge of the costs involved. Second—having secured this necessary information, we must analyze the defects revealed by the study, and proceed with plans for corrective measures. Third—and perhaps the most difficult step of all, we must establish the new routine.

Let us examine each of the three steps enumerated in some detail. First, in securing information, it is not always necessary to have actual cost figures; in fact, in some cases it is practically impossible to obtain them. I doubt if any of us would question the superior value of machine-aided ties or mechanically-tamped track. However, the immediate savings in either case are indeterminate, and are so interwoven with other items of track work that the benefits derived from them become a part of the general result. This, of course, does not apply to direct comparisons of organizations doing similar work at a given time, such as the gang set-up for laying rail or for surfacing track. Nor does it apply to comparisons of equipment used in such work. Here, we must have definite figures. While in many instances we may rely upon our good judgment, it is not always safe to rely upon the opinions that we form unless they are backed by actual figures.

The use of machines, in themselves, on a job does not

* Cost Engineer, Chesapeake & Ohio, Richmond, Va.

always mean saving money; sometimes it is more costly. In many cases where the question of the purchase or use of machines is involved, a record of previous performance costs, either by manual labor or with other types of machines, is invaluable. The method of ascertaining and recording costs will depend largely upon the particular objective in view, varying from simple time studies to complete details of all operations over a period of years. A number of railways have made good use of the moving picture camera in studying the effects of machines and special gang organizations on performance. This method has the advantage that the films may be run over and over again, making it possible to note each time a different operation and its relation to concurrent operations.

I had the privilege of presenting to this association, at your convention in 1927, a report on the Collection and Use of Cost Data by Supervisory Officers. This report included a description of the cost-keeping system that had been established on the Chesapeake & Ohio for recording in detail a record of all track work performed. That system is still in effect on our road. The data collected during the last 15 years have been of great value to us when considering the purchase of the many new machines that have been brought out during this period, and also in adapting our organizations to the use of those machines that have been purchased.

The second step in work simplification, that of analysis, is an extensive subject, ranging all the way from simple arbitrary decisions, such as whether we will mow the right-of-way once or twice a year, to the highly complex studies required in determining the proper organization for a fully mechanized track-surfacing or rail-laying gang. It is asking too much of a general foreman in charge of a large mechanized rail-laying gang to make spot decisions as to the lineup of his men and machinery without experiencing considerable lost motion. To minimize such losses, we have found that it is helpful to provide our men with information indicating what results are probable under any set of given conditions. This information, for example, determined from past experience and records, is shown graphically on a colored chart, the various colors and corresponding numbers of which give the foreman an approximate idea of how many rails he can expect to lay in a given time with the force available, employing any one of several methods of operation, and at what cost.

The establishing of a new routine in track work is not simply a matter of issuing instructions, for success cannot be achieved without the aid of competent direction and supervision. Herein lies the importance of care in the training of our subordinates. We all recognize the inevitable fact that some day we will reach the end of the line, and must pass our responsibilities on to others. The extent to which they will be successful may depend largely on the training that they have received from us.

At the time that the cost system was established on the C. & O., the subject of the replacements to be expected over a period of years was given careful study. The conclusion was reached that a system of training that would give prospective supervisory officers a common basic knowledge of the relative values of various track work operations would be most effective in securing uniformity of purpose in handling work. It was concluded further that the placing of these men under the immediate direction of experienced supervisory officers would be beneficial to both. The trainee would have the opportunity of learning the methods of management employed by his superior officer, who, in turn, would receive valuable work performance information heretofore unavailable to him. A system predicated on these conclusions was put into effect and has been continued in operation

ever since. We consider that for us the question of replacements has been solved.

Earlier in this paper I called your attention to the notable reductions in the cost of track maintenance that the railways have effected during the last 15 years. At the present time revenues are increasing and we may reasonably expect to receive larger allotments of material and labor. Just how long this favorable situation will remain is anybody's guess. There is no doubt whatever that this country, with the world at large, is facing an economic crisis. What the outcome will be for the railways no one can predict. What demands we will have to meet, only the future can reveal. We should, however, while we still have time, consider what steps we can each take in the further simplification of our work, so that we will be prepared if, in the future, we are called upon to meet even more drastic conditions than those that have prevailed in the past.

Handling Snow and Ice— Organization, Equipment, Methods

In a comprehensive report, a committee of which P. Chicoine, roadmaster, Canadian Pacific, was chairman, set forth in detail the measures that should be taken to cope with snow and ice. The committee first stressed the importance of careful advance planning, pointing out that the efficient handling of snow and ice in terminals and on the line requires a detailed plan of organization, involving not only a thorough knowledge of local conditions, but also a pooling of the resources of the operating, mechanical and maintenance of way departments so that each understands the part that it is to play and is in position to co-operate when required. The first days of spring, it said, before the experiences of the previous winter are out of mind, are not too early to begin planning for the next year. It then emphasized the importance of a careful fall check-up of equipment and forces, so that all will be in readiness when the first storm arrives, and so that all forces will go into action without hesitation.

Among the many types of equipment required for effective snow-fighting work, the committee mentioned brooms, shovels, picks, switch heaters, (electric, oil, gas and steam), snow-melting cans and torches, air tampers with specially-pointed tools, push plows, rotary plows, flangers, spreaders, weed burners, tractors equipped with either bulldozers or front-end loaders, snow loaders, track mounted and off-track type cranes equipped with clamshell or snow buckets, platform sweepers, trucks, etc. In addition, it discussed the functions and use of snow-melting pits, snow trains consisting of side-dump ballast cars and Ledgerwood or rapid unloaders, snow fences and snow sheds. In the case of each type of equipment or facility, the committee discussed the special problems encountered and how they can best be overcome. For example, commenting upon the operation of snow trains and push plows, it said:

"A common mistake of many plow crews is to pull in the wings and raise the flexible points or flangers in a cut when there is a liability of the train being stalled, thinking that by so doing they can get through. If the train should become stalled with the wings closed and the flangers raised, it will be necessary to dig the plow and engine out, while if they should succeed in getting through by moving slowly with wings closed, they will leave a very bad track condition over which it is not safe to back the plow in order to go through the cut a second time. However, if the wings are kept open and the flangers down until the train stalls, the engine has a

good flange and can generally back out unaided and make as many runs as necessary to clear the cut properly.

"Another fault among some plow foremen is the practice of maintaining continuous full pressure on the wings when in operating position. Prudent operators run with the valves lapped, where necessary; that is, after having thrown the wings out to full-out position, the pressure is released slightly through the lapping of the valves, which will permit the wings to close sufficiently if they should come in contact with some concealed object, rather than being held rigidly which causes the plow wings to spring forcibly, breaking safety chains, releasing the pistons from the wing-out cylinders and the possibility of derailing the plow.

"Bucking side-hill drifts constitutes a problem of considerable anxiety to plow foremen. It has been found through experience that the use of two powerful engines coupled together is not the best practice, as it has led to derailments. A preferable procedure is the use of a single powerful engine, with a follow-up engine to pull the equipment out of the drift when it stalls in a cut. When the drifts are higher than the top of the wings, they should be broken down to minimize side pressure."

Commenting upon snow and ice problems at terminals, to which it gave considerable attention, the committee said in part as follows:

"Contrasted with the manual methods which were employed for keeping switches clear almost universally up to a few years ago, and still common on many roads, maintenance of way men now have at their command a variety of snow-melting and other snow-fighting devices which have proved their effectiveness under the most adverse conditions of heavy snowfall, high wind and low temperatures. And it has been amply demonstrated that the devices which melt the snow at switches and interlockings as it falls make it practicable to reduce, and in many cases, to eliminate the manual effort required to keep switches clear, and, incidentally, the large amount of casual labor that has heretofore been necessary.

"Fully as impressive as the effectiveness of these snow-melting installations are the economies that have been realized through their use. To these readily-determined amounts may be added an equal or probably greater indirect but indeterminate saving in transportation costs through the elimination of train delays and interrupted traffic."

In conclusion, the committee emphasized that in coping with snowstorms, nothing is more valuable than preparedness—an organization properly established, with an adequate complement of supplies, properly distributed, with complete knowledge of the territory and machinery under its charge, operating to a predetermined schedule wherein those assigned to supervisory positions are available when required to make decisions and to handle emergencies as they arise. Experience, the committee said, has taught that the cheapest and most effective way to cope with storms is to keep abreast of the snowfalls, which may not be possible if initial action is delayed unduly.

Discussion

The discussion turned to the use of high-pressure steam for keeping switches clear of snow. It was shown that while this is effective at temperatures well above zero, it is ineffective at or below zero, because of the formation of ice. The use of weed burners for melting snow then came up for consideration, opinion being somewhat divided as to the desirability of using them, with the preponderance of opinion in their favor. The use of tie tamping equipment, fitted with special bits, was

recommended for clearing ice from tracks and elsewhere. The protection of switch ties from the flame of oil-burning switch heaters was given consideration and the use of asbestos sheets for this purpose was suggested. Attention was called to accumulations of ice that sometimes form around switches equipped with switch heaters, and the use of hydrocarbon snow-melting equipment was suggested for combating the ice.

Ditching and Bank Widening— Methods and Equipment Best Suited

Off-track power equipment is rapidly superseding on-track equipment for ditching, bank widening and other similar work on the railways, according to a committee of which C. Halverson, division roadmaster, Great Northern, was chairman, and, in many cases, is showing marked advantages and economies. An adequate system of roadbed drainage and strong and stable embankments are essential to economical track maintenance, the committee said, which, it continued, call for constant attention on the part of the railways to ditching and bank widening.

For carrying out these classes of work, it found that the methods employed in the past have been subjected to constant change, especially in recent years by reason of increased wage scales and the development of machines designed especially for the purpose in the light of present-day operating conditions. Crawler-type tractors, for example, it said, equipped with bulldozer and angle blades, plows, front-end loaders and other attachments, have been found highly adapted to the sloping and widening of embankments where borrow is available; to the cleaning out and forming of shallow ditches; and, in many cases, to cleaning out cuts, being adapted particularly to work under wire lines and around obstructions which tend to hamper other equipment seriously. Their greatest use, it said, is in sloping and widening fills with maximum heights of 6 to 8 ft.

Where cuts and fills are light and rock is not present, the committee said that a grader hauled by a crawler-type tractor comprises one of the most efficient methods for ditching and for sloping and widening banks. This combination of equipment, it pointed out, is operated by a two-man crew and delays to its work on account of traffic are negligible. The committee also called attention to the fact that crawler-type cranes equipped with draglines are coming into general use for ditching, bank work and a variety of other tasks, and that carry-all equipment, hauled by crawler-type tractors has been found effective in cutting wide surface ditches through shallow cuts where the topography of the adjacent land is such that the surface water can be drained to the edges of the right-of-way.

Still another unit of equipment receiving favorable attention by a number of roads, according to the committee, is the elevating grader.

In spite of their disadvantage of being operated on the track, the committee still found many important uses for the car-mounted ditcher, particularly for cleaning out or widening shale or rock cuts, and for the ditcher-spreader, which is used extensively for cleaning, enlarging and shaping cuts of clay, dirt and gravel. It also found the use of air-operated dump cars highly effective and economical for delivering material out on high fills where the ground is not favorable to the operation of off-track equipment, and especially for delivering material for the proper side support of fills at bridge ends and other points where material is not readily available. It

(Continued on page 448)

Motor Transport Section

New C. N. R. Bus Route in the Rockies

New Columbia Icefield Highway links Jasper and Banff in a most spectacular drive



Photo by Canadian National

OPENING last Dominion Day (July 1) of the whole of the new 186-mi. Columbia Icefield Highway between Jasper, Alta., and Banff links by highway for the first time the premier mountain resorts of the Canadian National and Canadian Pacific. A trip between the two hotels formerly required a 511-mi. drive. Running *through* the midst of the most spectacular portion of the famed Canadian Rockies in a north-south direction rather than *across* them, the new route permits tourists for the first time in history to see the mountain region along its backbone by motor vehicle and witness the unique character of low-hanging masses of glacial ice which are the birthplace of rivers flowing to the Pacific, the Arctic and Hudson Bay—the roof of the continent.

The beauties of the new Dominion-built highway have

been made available to railroad travelers by regularly-scheduled bus services operated jointly by the Canadian National, Brewster Transport Company and the Rocky Mountain Tours & Transport Company, which commenced full operation on July 1. Two district services are operated as follows:

(1) Exclusively for guests at Jasper Park Lodge (C. N. R. hotel), motor buses are operated by the Canadian National (Hotel department) between the Lodge and the Columbia Icefield Chalet, located at the foot of Athabasca Glacier, 65 mi. from Jasper Park Lodge or about midway between the lodge and Lake Louise. At the Chalet connections are made with motor buses of the Brewster Transport and Rocky Mountain, both of which companies operate between the Chalet, Lake Louise,



Two of the New Motor Buses Which the Canadian National's Hotel Department Operates Between Jasper Park Lodge and the Columbia Icefield Chalet Shown at the Lodge Entrance

Photo by Canadian National

Banff and Calgary (Calgary is 85 mi. east of Banff). The schedule of the joint services from the lodge is as follows:

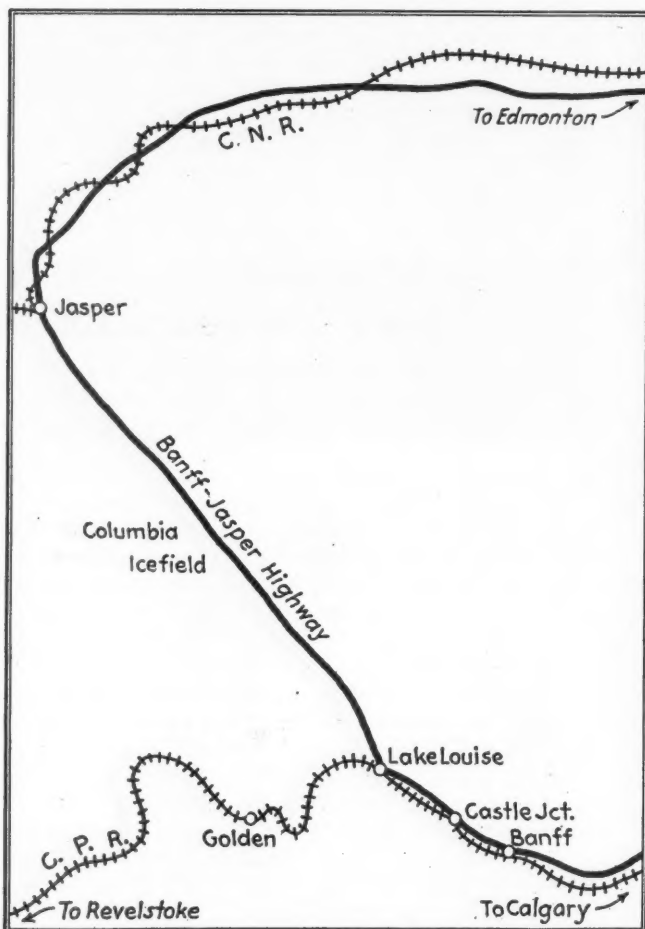
Lv. Jasper Park Lodge 9 a. m.
Ar. Icefield Chalet Noon
Lv. Icefield Chalet 1:30 p. m.
Ar. Lake Louise 5:30

In the return direction the schedule is:

Lv. Lake Louise 8:30 a. m.
Ar. Icefield Chalet Noon
Lv. Icefield Chalet 2 to 2:30 p. m.
Ar. Jasper Park Lodge 5:30 p. m.

These services are operated daily from June 15 to September 15.

(2) Brewster Transport and Rocky Mount also operated through motor buses between the town of Jasper



The New Columbia Icefield Highway Runs Through the Best Part of the Canadian Rockies Between Jasper, Alta., and Banff Connecting the Canadian National and Canadian Pacific Railways—The Map Shows the Location of the New Route and Connecting Highways Paralleling the Railways

and Lake Louise, Banff and Calgary. These buses do not operate within the confines of Jasper Park Lodge property.

Railroads in Canada and the United States issue during the period June 1 to September 15, inclusive, round trip tickets reading from originating point to Jasper and return from Banff or Lake Louise to originating point and vice versa. Also railroad tickets reading from Winnipeg, Man., and east or south to Jasper or beyond are valid for transportation from Winnipeg to Calgary, at which point motor transport may be secured from Calgary to Jasper via Banff and Lake Louise. The railroad ticket will then be valid to destination. Similar routings in the reverse directions are also available.

During the stop-over of from 1½ hr. to 2 hr. provided

at the Chalet, passengers are offered restaurant facilities of the Chalet which include both a table d'hôte luncheon and a la carte luncheon service. Hand baggage is carried free of charge on all motor services between Jasper and Calgary but trunks and over heavy baggage are not carried. However, such of the latter that is covered by railroad transportation held by passengers is checked by railroad between these points via a circuitous route.

Jasper Lodge Maintains a Fleet of Motor Vehicles

The Columbia Icefield Highway service of the Canadian National described above is in addition to services operated by the Hotel department on sightseeing motor drives in Jasper National Park, including the Columbia drive. These services are all-expense and are operated only when a sufficient number of guests sign up.

The Columbia Icefield Chalet *scheduled* service is handled by two new 20-passenger White buses (as illustrated herewith) while the all-expense drives to various points in the park are handled by seven-passenger touring cars with open tops. The entire fleet maintained by the Hotel department at Jasper Lodge comprises the two new buses; three older General Motor buses for shuttle service to and from the town of Jasper; 21 open-type touring cars; 1 sedan service car and a number of baggage and dump trucks. The car fleet is maintained by two mechanics who, during the inactive season, overhaul all units completely at the Jasper enginehouse of the railroad. Taking into account stiff grades, gravel roads and a short period of use, the running costs of the buses are estimated at approximately 9 cents per mi. Robert Sommerville, manager, Jasper Park Lodge, is in charge of the motor services.

The Brewster Transport Company, founded by Major Fred Brewster who was the first to traverse the route now followed by the new highway in 1912 by pack train, has operated motor buses out of Lake Louise and Banff for several decades and maintains pack train services and shelters at various points in Jasper and Banff parks. It inaugurated its through service between the town of Jasper and Banff on June 14, handling the operation with 22- and 29-passenger buses with so-called "North-west" bodies built especially for the company. The entire Brewster fleet has capacity for 1,200 seats.

D. L. & W. Saves Time and Space with Trucks

BY SUBSTITUTING motor truck service for local l. c. l. cars between Scranton, Pa., and Kingston in the heart of the Pennsylvania anthracite-mining region, the Delaware, Lackawanna & Western has succeeded in cutting 24 hr. off time of delivery to and from these and intermediate stations and eastern and western points on the railroad. In addition, by this and other consolidated car arrangements, it so reduced car lay-out requirements thereby that it was able to give over the transfer platforms at Scranton to other purposes and merge merchandise transfer with freight station operations.

After several years of experimenting with truck service along its Bloomsburg sub-division (the branch which joins the main line at Scranton and runs along the west bank of the Lackawanna and Susquehanna rivers southwest to Northumberland), the Lackawanna regularly inaugurated, on July 1, 1938, truck service for the transportation of l. c. l. shipments between Kingston and



The Contractor Who Performs Motor Vehicle Operations for the Lackawanna at Scranton, Pa., Uses the 12-Ton Tractor-Trailer Outfit (Top) for the L. C. L. Station Service To and From Kingston and a Smaller Unit for Inter-Railroad Interchange and Pick-Up and Delivery at Scranton (Bottom)

Scranton, a distance of 18 mi., serving intermediate stations at Taylor, Old Forge, Duryea, Pittston, West Pittston, Wyoming, and Luzerne. The service is performed under contract by the same firm which does the road's p. & d. work in Scranton.

The use of truck service for the branch-line haul to Scranton has made possible next-morning delivery for shipments to and from points west to Buffalo and east to New York, via fast manifest trains which arrive in Scranton from both directions about 3 a. m.; out-going cars load until about 11 p. m. This is a saving of approximately 24 hours as compared with the former local freight service, which required a day's lay-over at Scranton. The highway service has also eliminated the necessity for a local freight train to Kingston since carload lots to or from team-tracks are now handled by coal train crews. Finally it has saved the movement of six lightly-loaded merchandise cars daily in each direction between Scranton and intermediate stations to Kingston and so reduced lay-out requirements that transfer operations at the former point were easily accommodated at

the freight station by the addition of one platform-track. The former separate transfer sheds are now used for unloading perishables, automobiles, etc., with a capacity of 80 cars.

Inter-Railroad Trucking

At the same time that it initiated truck service to Kingston, the Lackawanna also entered into an arrangement with the Delaware & Hudson and the Erie at Scranton whereby each road turns over l. c. l. interchange traffic to its respective p. & d. contract truckman for forwarding to stations of the other roads. This scheme eliminates circuitous hauling of lightly-loaded trap-cars between stations, none of which is more than $\frac{3}{4}$ mi. distant from either of the others; D. L. & W. interchange with the Erie by rail, for example, was made at Dunmore, about 4 mi. from Scranton. Since the Lackawanna's interchange traffic with both roads totals only from 1,000 to 2,000 lb. daily, the inter-station movements are handled without difficulty on regular p. & d. trips.

Reading Installs 20 Highway Streamliners

THE Reading Transportation Company, subsidiary of the Reading, has recently placed in service 20 new streamlined motor buses on a number of routes out of New York, Philadelphia, Pa., and other Pennsylvania points, which replace vehicles of an older type. The new equipment includes eight 29-passenger, 145-hp. inter-city type units manufactured by Yellow Truck & Coach; five 29-passenger, 141-hp. inter-city type units built by Flxible and seven 29-passenger, 95-hp. city-type units built by the Ford Motor Company.

The new vehicles will be operated over the following routes: New York-Allentown (Pa.)-Harrisburg, New York-Williamsport; Philadelphia-Allentown-Williamsport; Philadelphia-Pottsville; Reading-Lancaster and a number of branch lines. The exterior of the new vehicles is silver and blue and the interior is marked by a deep all-blue tone. Engines are located in the rear. Special features include rear-end compartments for large pieces of baggage, indirect lighting fixtures and exhaust fans which replace 300 cu. ft. of air per minute.



A Fleet of 20 New Buses Recently Placed in Service By the Reading Transportation Company Consists of Three Types of Units—Representatives of Which Are Shown Above

New Book . . .

Motor Freight Traffic—Facts, Fundamentals, Economics, by Harry G. Williams. 216 pages. 8¾ in. by 5¾ in. Bound in cloth. Published by the Freight Traffic Research Institute, Hartford, Conn. Price, \$3.50.

This book is written primarily for truck operators. But since it goes deeply into the subject of rate structure and the true economic function of highway freight transportation it is proper material for the railroader's reading list.

In fact this is the fullest and soundest discussion the reviewer has read of the current controversy as to whether the truckers should seek rate parity with the railroads or establish an individual scale designed to reflect truck operating costs and service advantages. The author minces no words; he supports the latter principle and throws in his lot with the so-called New England school.

A few sample quotations will show not only the reasonableness of his views but his excellent writing as well. Here is one from his chapter on "The Transportation Problem," the core of the book: "Highway transportation and railway transportation are so vastly different in main operating utilities and characteristics that the rates of the one cannot properly or fairly meet the advantages, opportunities and requirements of the other in all cases. Rates which are entirely fair and suitable for the services of the one may be too high or too low for the services of the other; and rules which affect transportation charges may adequately meet the conditions and requirements of services performed by the one may be too stringent or too lax for those of the other." And again: "... but uniformity for its sake alone or for any other reason is not likely to result in each mode of transport finding its true economic place in our national transportation system, and this is essential if each is to develop its operations to the highest possible degree of efficiency and economy and provide adequate service at the lowest possible transportation rates."

Mr. Williams not only decries rate equality but also certain railroad efforts to obtain acceptance of a basis of railroad differentials under truck rates to neutralize alleged inferiority in railroad service. To support his contention he points out that the motor carriers may draw tonnage of a comparatively limited class only and must therefore "avail themselves of every fair and normal advantage or opportunity to attract patronage of their services within the sphere of profitable operations." At the same time he believes that there are few advantages of the motor carriers which the railroads cannot overcome through changes in operating practices.

The author goes deeply into the subject of the peculiar importance of weight-density considerations in connection with truck rates and costs, which so many operators seem to ignore. It is his conclusion that because of this factor, operators cannot afford to carry low rated shipments in back-haul movements since tonnage so obtained might constitute a direct out-of-pocket expense.

Elsewhere in a chapter on "The State of the Trucking Industry" contributed by L. E. Golden, secretary-manager, Eastern Motor Freight Conference, Inc., of Hartford, Conn., this special nature of the motor truck as a vehicle becomes a major theme in looking for the reasons for the failure of so large a part of the trucking industry to operate profitably. It is questioned whether the preachers of the "build-up-your-load-factor" gospel are on the right track and suggested that a sounder gospel would be: "If trucks are moving light or empty; if the tonnage between two terminals is much heavier in one direction than the other, seek ye out the first cause! Is it because of a heavy movement of basically rail traffic persuaded in the one direction by rate advantages? Consider carefully whether the cure is in reducing tonnage rather than in increasing it."

Other sections of the book deal with fundamental considerations in rate making; the various schools of thought; the rate "conferences" and the current I. C. C. class rate investigations. At several points the author attacks the practice of making weight breakdowns (i. e., successive rate concessions for volume shipments) in rate scales of motor carriers as an unwarranted dis-

sipation of revenues and holds that only truckload and less-truckload rates can be justified.

Detailed appendices give comparisons of railroad and truck rates and furnish formulas for truck class ratings and rates on a weight and volume basis.

Hale Holden Passes at 71

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trol of the company was centered in New York where Mr. Holden made his headquarters. On August 1, 1932, an important reorganization of executive control was effected. The positions of chairman of the board and chairman of the executive committee were abolished and Mr. Holden was given the newly-created post of chairman of the company, having supreme executive jurisdiction "with the support and assistance of the vice-chairman and president." This unique arrangement was set up principally to centralize management of the road which, due to its scattered holdings and natural division into territorial operating units, had tended toward decentralization. Upon reaching the age of 70 last year, Mr. Holden retired as chairman under pension rules of the company, the office of chairman was discontinued and the duties and authorities thereof were transferred to A. D. McDonald, the new president.

Roadmasters Hold Largest Convention Since 1929

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pointed out that these cars can be handled in local way freight trains without additional expense.

The discussion of this report centered primarily upon the relative merits of off-track and on-track equipment for various types of ditching work, the general conclusion being that off-track equipment is becoming a necessity on heavy-traffic lines to avoid interference with train movements. Several expressed the opinion, however, that the use of on-track ditchers and dump cars was still the most effective and economical for ditching work in long cuts and for bank widening work involving long hauls.

* * *



Use of Motor Trucks at Scranton Has Permitted the Lackawanna to Concentrate L. C. L. Transfer Operations at the Freight House (Top), Leaving the Former Transfer Sheds (Bottom) for Carload Deliveries

NEWS

New Figures on Mileage Rates

I. C. C. issues report by statistician, favoring more refined methods for mileage scales

The Interstate Commerce Commission's Bureau of Statistics has made public a revised edition of that study of "Progression in Freight Rate Mileage Scales" which was originally issued about three years ago and reviewed in the *Railway Age* of October 9, 1937, page 491. The revised edition is Statement No. 4031, a document of 56 mimeographed sheets; the revision was supervised by Statistical Analyst E. S. Hobbs, who prepared the original study. Like other Bureau of Statistics studies which are published from time to time, it is "issued as information" and "has not been considered or adopted by the Interstate Commerce Commission."

Generally speaking these Hobbs studies undertake to develop a uniform method of projecting rates throughout the entire range of distances involved in a situation wherein mileage scales are being prescribed. Thus the actual composition of freight rate distance scales as they are found in reports of the commission are analyzed and made factors in a composite system which if applied to a specific case would produce a smooth progression wherein each successive per cent of increase in the rate at each mileage block would be less than the one immediately preceding, and also the differences between successive per cents of increase would not progress in ascending order. In the 1937 study the composite system was developed by stating the percentage relation of each rate (both class and commodity) to the 300-mile rate in its own scale; then these percentages were combined to make the composite system.

That method and others are reviewed in the revised study, which finally adopts the plan of constructing its composite progression by the use of the "link relative," i. e., computing the ratio of each rate to the next lower rate and using the average of the corresponding relatives to indicate the composite rate of progression. This method, says the present study, "is simple and direct and can be applied to all scales, including those that do not extend as far as 300 miles, and those which start at a greater distance than 300 miles." It adds that in the event that a large number of scales are being reduced to a composite, medians rather than arithmetic means may well be used in order to eliminate undue weighting by the inclusion of extremes.

Meanwhile, however, the explanatory note had pointed out that the foregoing refinement in the method of consolidating a number of scales into one composite scale "has had no appreciable effect on the form of the recommended composite scale." Another change from the previous study is the elimination of the discussion of the cost of service, the reason for the elimination being the thought that costs "should receive more detailed treatment in a separate study."

Further Delay for Private-Carrier Safety Rules

The Interstate Commerce Commission, Division 5, has further postponed from October 1 until October 15 the effective date of its order in the Ex Parte MC-3 proceeding which prescribed safety regulations for private motor carriers operating in interstate commerce. The order was originally promulgated to become effective August 1; and the present postponement (the second) was granted in order that the commission might have opportunity to consider petitions for rehearing which have been filed.

Susquehanna Refurbishes Commuters' Cars

The New York, Susquehanna & Western placed the first nine of 25 reconditioned coaches in commuter service on September 24. The cars, which were purchased by the road in June from the Erie, have been painted in silver, gray and maroon. Interiors have been re-decorated in colors to blend with the red Spanish grain leather of the seats, which have been entirely re-upholstered. The ceiling is done in ivory, the upper sidewalls and curtains light gray and the lower sidewalls brown. The floor is tile red. Each car has a ventilating fan at either end.

B. & O. Now Has Five Diesel-Driven Trains

The Baltimore & Ohio will place seven new 2,000-hp. Diesel-electric locomotives (purchase of which was reported in the *Railway Age* of September 21, page 422) in service today (September 28). Henceforth five of its through trains—the Capitol Limited and the Shenandoah between Washington, D. C., and Chicago, the National Limited between Washington and St. Louis, Mo., the Royal Blue and the Columbian between Washington and New York and the Abraham Lincoln of the Alton between Chicago and St. Louis—will be operated entirely by Diesel-electric power. Westbound schedules have been shortened to permit better connections at Chicago and St. Louis.

Steel Industry Ready to Grow

Theory that industrial growth has ended is true only if politics prevent revival

A bright future for industrial progress was painted by Irving S. Olds, newly-elected chairman of the board of the United States Steel Corporation at a luncheon in Chicago on September 19, while he and members of the board made a tour of subsidiary plants, including those at Pittsburgh, Pa., on September 18, at South Chicago on September 19 and at Birmingham, Ala., on September 20. The luncheon given by Benjamin Fairless, president, was attended by several hundred business representatives of Chicago. Mr. Olds said in part:

"During the hearings before the Temporary National Economic Committee less than a year ago the thesis was advanced that industrial progress in the United States has reached its zenith—that no frontiers are left for business to conquer—that as a consequence our earlier economic notions about business must be completely revamped. I am not a believer in any such defeatist arguments. Unless we are to have a complete departure from the system of private enterprise which developed this country and made it the envy of the industrial world, I am confident that American business, if given a fair chance, will continue to develop and to go forward; that American resource and ingenuity will produce new inventions and new processes, opening up new lines of industrial activity; that private capital will be required and will be available for the financing of these new enterprises, as well as for taking care of the normal growth and development of established industries.

"The steel industry has not stood still in the past. I do not anticipate that it will do so in the future. As many of you know, the methods used in the production of certain flat rolled products, notably tin plate, sheets and strip, have been almost completely revolutionized during the past ten or twelve years. This period witnessed the investment by the steel industry of many hundreds of millions of dollars in new facilities to produce these new products. The capital expenditures of the United States Steel Corporation during the last ten years have aggregated more than \$500,000,000. The result of all this to the consuming public has been greatly superior products at lower prices. New uses have been made of these new products. This

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Defense Council Defends Oil Cos.

Fearful that anti-trust suit
may curtail construction
of gasoline pipe lines

The Department of Justice has made public a report from the National Defense Advisory Commission on the question of the advisability of the Attorney General filing a "comprehensive" civil anti-trust suit against 22 major oil companies and their subsidiaries, comprising a large part of the oil industry, seeking to force these companies to divest themselves of certain types of properties, such as pipe lines, tankers, and marketing facilities, and to disintegrate companies so as to separate the transportation and marketing from the production of oil. As pointed out in the *Railway Age* of August 17, page 261, the filing of the suit was held up temporarily at the request of the National Defense Advisory Commission so that its effect on the problem of national defense might be ascertained.

The report of the commission states at the outset that it is opposed to "monopolistic or conspiratorial price-fixing and to artificial restrictions on supply of materials (except where restrictions on supply are temporarily necessary to promote sound conservation of the nation's resources under law)" and that it will "wholeheartedly approve any appropriate legal action brought to eliminate such restraints on competition, where they are proven to exist."

On the subject of the divestiture of pipe lines and tankers, however, the commission has some serious doubt as to whether such action should be taken at this time. It goes on to point out that the oil companies are well integrated for national defense needs at the present time and that an order requiring such a divestment would require readjustments and a process of habituation under a new set-up, which "will involve complications and delays."

It is further observed that time is of the essence of the national defense requirement and that the effect of the suit may cause doubts and uncertainties to arise as to whether a company should undertake capital expansion in properties which may be divested, as to who will be able to afford such expansion (in view of the prospective division of capital resources), and even as to who could appropriately apply for government assistance in such expansion.

However, the commission does not suggest that the Department of Justice should drop the suit, despite the fact that it goes on to say that "to a greater or less degree certain prayers for relief may hinder the defense program."

After stating that the proposed divestiture would involve not only local bulk plants, storage facilities and service stations but also trunk marketing facilities such as gasoline pipe lines, barges, tank cars and terminals for petroleum products, the commission's report goes on to say that at present both the Army and Navy are interested in having private capital

construct pipe lines to transport gasoline to the East Coast States without the necessity "of the long haul around Florida and up the Atlantic coast, which, in time of emergency, might be difficult and, in any event, would require a large convoy service."

"Moreover," continues the report, "in time of emergency it would be possible to take a part of the burden of gasoline deliveries to the east coast through these gasoline pipe lines and in turn release tankers for the purpose of handling the essential products such as Navy fuel oil which cannot be handled in crude oil or gasoline pipe lines. These gasoline pipe lines would also afford exceptionally desirable locations for some of the reserve stocks of aviation gasoline for both the Army and Navy since deliveries can be made at low cost and removal can be effected readily even in time of emergency. An initial expenditure of approximately \$13,000,000 is involved in the gasoline pipe lines now under consideration and it would be desirable to have private capital construct similar equipment for emergency use in other parts of the country."

(Presumably, the line mentioned here as under consideration is a proposed gasoline pipe line which would run from a Baton Rouge, La., refinery in a northeasterly direction to a terminus at Portsmouth, Va. Such a line was recently mentioned in testimony given before a Senate interstate commerce subcommittee, which held hearings on a bill to require new pipe lines or extensions of existing lines to first secure from the Interstate Commerce Commission a certificate of public convenience and necessity before beginning construction.)

The report concludes by pointing out that in the Defense Commission's opinion, "It is clear that substantial additions to the gasoline pipe line and terminal storage capacity of the industry will be necessary under this program (the present national defense program)." It is the commission's belief that arrangements and understandings to secure such gasoline pipe lines and storage may have to be discarded and delayed until the ability to perform is clarified, and later new negotiations with new parties begun if the existing companies are required to divest themselves of such facilities.

No action has been taken as yet by the Department of Justice, but Attorney General Jackson indicated that later this week he would have some announcement to make regarding the disposition of the suit.

Surgeons Elect Officers

The American Association of Railway Surgeons elected the following officers at its annual meeting in Chicago on September 18: President, Dr. Lucien Stark, district surgeon of the Chicago & North Western and the Chicago, St. Paul, Minneapolis & Omaha; vice-presidents, Dr. C. A. Walker, chief surgeon of the Northwestern Pacific and chief surgeon and manager of the hospital department of the Southern Pacific; Dr. J. L. Crook, of the Illinois Central, and Dr. R. M. Graham of the Pullman Company; treasurer, Dr. T. L. Hansen, chief surgeon of the Chicago, Rock Island & Pacific; and secretary, Dr. D. B. Moss.

Informal Meeting on General Probes

I. C. C. wants to talk over the
pending 28,300; 28,310 and
MC-C 150 cases

Parties of record in the Interstate Commerce Commission's general investigations of the class rate structure, the consolidated freight classification and the motor freight classification have been invited to be represented at an informal conference which the commission thinks will be desirable as a preliminary to formal hearings in the aforementioned proceedings, docketed, respectively, as No. 28300, No. 28310, and No. MC-C 150. Meanwhile the commission's Division 2 has postponed from October 1 until December 1 the deadline date for filing the traffic information called for in the order of last January 9; and it has issued two drafts of a proposed order to take the place of that January 9 order.

With respect to the informal conference, set for October 28 at the Hotel Morrison, Chicago, I. C. C. Secretary W. P. Bartel's notice says: "It is desired . . . to endeavor to develop more clearly what matters are in issue, and what particular phases of the general subjects designated in the orders of investigation shall be first explored. It will be desirable to discuss informally the general character of factual matters which should be developed upon the record, and how such matters may best be shown. It is thought that such a preliminary conference might give direction to the studies and research of the interested parties, so that upon any subsequent formal hearings a better record of matters necessary and proper for consideration by the commission may be made with a minimum of lost motion and inclusion of irrelevant and immaterial matter, while, at the same time, assuring proper consideration shall be given to all matters which are important for consideration."

Next Secretary Bartel leads up to his setting forth of a series of questions to which consideration should be given—"not with the thought that the informal discussion will afford a basis for their ultimate decision, but that an interchange of expression may indicate the opinions of counsel as to their importance, at what stage of the formal proceeding they should be developed, and how and by whom they should be presented, and what the sources should be for the commission's becoming informed." Meanwhile, the matters indicated are to be taken as suggestive, and "other like matters may be brought up by anyone concerned." Here is the list set forth in Mr. Bartel's notice:

1. At what stage of the proceeding should the record be made to show the results of a traffic study; before consideration is given to the fundamental questions of classification construction, so that the questions as to classification may be considered in the light of a more or less full and detailed analysis of the traffic of the country, or, after consideration has been given to the nature of a classification or classifications, with a view to ascertaining the effect?

2. The outstanding order of the Commission which calls for traffic information, entered January 9, 1940, has been found to be impracticable in certain respects, and pending further study of

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Meticulous Car Rules Wasteful

In correcting alleged abuses
A. A. R. asks that efficient
car use be not overlooked

A. F. Cleveland, traffic vice-president of the Association of American Railroads, has sent to Interstate Commerce Commissioner Clyde B. Aitchison a letter setting forth what the railroads have found it practicable to do with respect to the alleged abuses and irregularities in ordering and furnishing cars which were dealt with by a three-man committee of the I. C. C.'s staff in a report made public last March. The report which was reviewed in the *Railway Age* of March 30, page 591, took the form of a memorandum to Directors Hardie, Bonnevill and DeGroot, respectively, of the commission's Bureau of Traffic, Inquiry and Service, who appointed the three-man committee consisting of Burt L. Smelker, C. G. Jensen and C. C. Wall.

The alleged abuses and irregularities to which the Smelker-Jensen-Wall report was addressed resulted from the practice on the part of shippers of ordering a car of a type or capacity not actually wanted and being furnished by the railroads with cars actually wanted, the shippers thereby obtaining some rate or other advantage by the billing of their shipments on the basis of charges and minimum loading requirements applicable to the cars ordered. The report recommended that its suggestions for correcting the alleged irregularities be brought to the attention of the railroads, and further asked that the commission issue a show cause order if the railroads were unwilling to adopt voluntarily the suggested amendments to their tariffs. The report was transmitted to Mr. Cleveland by Commissioner Aitchison who pointed out that the commission "is in no sense committed to it," but added nevertheless that the recommendations deserved "the serious thought and attention of the railroads."

Generally Mr. Cleveland's reply deals with each of the situations discussed and recommendations set forth in the Smelker-Jensen-Wall report, noting what the railroads think they can do in some cases and giving reasons why they cannot go along in others. "The railroads," Mr. Cleveland says in closing, "see no necessity for the issuance of a show-cause order, and ask that such an order be not entered. They are ready to have their committee consult with the commission's committee for the purpose of discussing the subject in the event the commission is not wholly satisfied with the views expressed in this answer." The aforementioned railroad committee is a group representing Eastern, Southern and Western roads and Southern and Western classification committees which worked with Mr. Cleveland in preparing the answer. And the answer has had the approval of traffic executives in Eastern, Western and Southern territories.

First among the commission committee's recommendations, as the railroads understand them, is that Rule 66(a) of Tariff Circular 20 be rescinded. This rule is an

administrative ruling of the commission embodying an expression of what may be expected in decisions in formal cases where issues are raised with respect to the furnishing of cars at variance with shippers' orders. The railroads are in accord with the recommendation that the rule be rescinded. "Rule 66(a)," said Mr. Cleveland, "has been the cause of many of the difficulties pointed out in the commission's committee report. It has caused to be published in freight tariffs carriers' convenience rules which are difficult, if not impossible of enforcement and therefore are easily circumvented. If the rule is withdrawn from the tariff circular the situation will be materially improved."

The next recommendation is that for heavy bulk freight in open top cars the absolute minimum be 100,000 lb., subject to a follow-lot rule; and that where the minimum is a percentage of the marked capacity the absolute minimum be that percentage of 100,000 lb. and that the minimum be based upon the capacity of the car used. In the event this results in substantial objections, the suggestion is that the tariffs provide (a) railroads will accept no orders for cars of less capacity than 100,000 lb., (b) for cars with marked capacity of 100,000 lb. and more but less than 110,000 lb., the minimum be 100,000 lb.; for cars with marked capacity of 110,000 lb. and more but less than 140,000 lb., the minimum be 110,000 lb.; and for cars with 140,000 lb. capacity and more, the minimum be 140,000 lb., and (c) if a railroad furnishes a car for which the minimum is greater than for the car ordered, it will protect the minimum for the car ordered.

After arguing that adoption of the foregoing suggestions would lead to "misuse of equipment," and bring "difficulty in distributing available equipment," Mr. Cleveland said: "The railroads propose to amend their tariffs to provide that for freight in open cars orders will not be accepted for cars of capacities less than the minima provided in connection with the line-haul rates. They are not in accord that follow-lot or two-for-one rules be established on bulk freight in open cars. Petitions will be filed for modification of outstanding orders which carry provisions for visual or cubical capacities as maxima."

A third recommendation of the I. C. C. committee dealt with heavy bulk freight in box cars, for which minima are based upon capacity. The recommendation is that the minimum be that for the car used, but in no case less than 80,000 lb. (or a percentage of 80,000 lb., where the minimum is now a percentage of capacity), subject to a follow-lot rule similar to that suggested for bulk freight in open cars. If substantial objections develop, the suggestion is that a carriers' convenience rule provide if the shipper orders a car of 80,000 lb. capacity or greater the railroad will protect the minimum for the car ordered; that for cars with capacity of 80,000 lb. or over but less than 100,000 lb. the minimum be 80,000 lb. and for cars with capacity of 100,000 lb. and over the minimum be 100,000 lb.

Noting that the "difficulties" cited by the I. C. C. committee in the foregoing connection related to flour and salt shipments,

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Bill Would Change Adjustment Board

Short Line Association sponsors
measure proposing far-reaching amendments

Far-reaching changes in the National Railroad Adjustment Board provisions of the Railway Labor Act are proposed by S. 4375 introduced "by request" in the Senate this week by Senator Smith, Democrat of South Carolina. The bill represents the views of the American Short Line Railroad Association, it being understood that some of the short lines have been apprehensive in the face of labor drives in connection with working rules and agreements.

The salient features of the bill as outlined in a memorandum prepared by C. A. Miller, vice-president and general counsel of the Short Line Association, are as follows:

1. A new board is created, consisting of 30 members of which 10 are selected by the railroads, 10 are selected by the employee organizations, and 10 are appointed by the President.

2. The public members of the board, appointed by the President, are removable only for inefficiency, neglect of duty, or malfeasance in office. They are to receive \$10,000 per year, and their appointment is subject to confirmation by the Senate.

3. Divisions 1, 2 and 3 of the board would be composed of 9 members each, and Division 4 would be composed of 3 members.

4. The board would be required to conduct its proceedings so as to accord procedural due process.

5. The board would have the power to require the attendance of witnesses and the production of books, papers, records, etc.

6. Provision is made for the taking of depositions.

7. Awards are required to state findings of fact upon which based.

8. Provision is made for judicial review of awards of the Board by any party in interest.

9. Awards are not to be retroactive for more than three years from their date.

10. Actions to enforce awards are required to be brought within two years from their date.

Meanwhile, charges that the National Railroad Adjustment Board, through its decisions dealing with controversies between the railroads and their employees, refuses repeatedly to give the railroads a square deal, were made in a brief filed by the Class I railroads with the Attorney General's Committee on Administrative Procedure.

The railroads in their brief said they do not wish to turn the Adjustment Board into a court but desire simply to have changes made in the Board's procedure "designed solely and simply to provide for ordinary fair play." The board in frequent decisions, according to the brief, makes use of technicalities to "promote the result which the labor members of the board and the referee desire to reach," but in other

cases ignores "not merely technicalities but even ordinary principles of reasoning, when that course is necessary to reach its result."

"What logic" the brief added, "is there in the position of a board which on the one hand holds that technical rules of evidence must be applied by railroad management in investigations on railroad properties, and at the same time claims that it must itself be free not merely from the so-called procedural technicalities, but also from ordinary principles of procedural fair play merely because the adoption of these principles would make it resemble a court?"

The railroads in their brief also declared that the board "has developed a habit of making a decision in a particular case based on some specific provision of the particular contract which exists on the property involved in that case, and thereafter proceeds to use that decision as a governing precedent to control all cases of like kind on properties where no such provision exists in the contract."

In a case involving the Denver & Rio Grande, the board including the carrier members, upheld specific contracts between the railroad and certain employees to mean that railroad yard work, except in cases of emergency, must be performed by yardmen.

"However," the brief added, "following that decision, a practically unbroken line of awards by the First Division through referees has sustained the right of yardmen to a monopoly of work in cases where there were no such provisions in the contract involved and even in cases in which the labor organization had been unsuccessful in obtaining the inclusion of such provisions in the contracts during the course of their negotiation.

"The board has thus granted rights by decision which were definitely denied in negotiation. It seems clearly a violation of ordinary common sense reasoning that where a board is supposed to interpret a contract and base its decisions on the contract between the parties, it should decide cases as if the contract contained a provision which it does not in fact contain merely because the board has previously reached the same decision in another case or cases where the contract did contain such a provision. Yet this is what the board is doing every day."

The railroads charged that where referees are appointed by divisions of the board to break deadlocks in various cases, "the preponderantly unsatisfactory character of referees' decisions may be largely due to certain features of the board's present procedure which place the referee at an almost hopeless disadvantage in arriving at correct decisions." Among the disadvantages faced by a referee, according to the brief, are the absence of any transcript or record of what occurred at the hearing when the parties presented their case orally to the board; absence of any proper factual proof when a referee finds the carrier members contending that the facts were to one effect, while the labor members contend they were to the opposite effect; the fragmentary and inadequate opinions of the board accompanying prior awards and the iron-clad rule of the First

Division of the board which prevents parties from appearing before the referee, or even filing briefs with him. As a result, a referee, when called in to break a deadlock, finds that the labor members of the board become counsel for the claimant while the carrier members become counsel for the defendant.

"The referees who decide cases for the National Railroad Adjustment Board," the brief continued, "are not umpires voluntarily selected by, and to that degree representing, the parties; but they are instead to all practical purposes judges imposed upon the parties by the Government regardless of their will. Decisions arrived at by such umpires are not left to be voluntarily applied by the parties if and as they see fit, but are given legal status and recognition by the provision that they may be enforced in the Federal courts by mandamus, injunction or other appropriate form of legal or equitable remedy."

The brief pointed out that no judicial review of the board's orders can be brought except by the party in whose favor the award has been made. "This precludes," the railroads added, "the carriers from ever having an opportunity to take an award into court because obviously in those cases where awards are made in favor of the carrier they simply dismiss the claim, and since therefore they do not require anybody to do anything, they are not susceptible of enforcement through court action or otherwise. On the other hand, where an award is made in favor of an employee the result is to require the carrier to do, or to cease doing, something, and under the statutory review procedure the validity of such a requirement is open to judicial examination only in the event that the employee in whose favor the award was issued chooses to take it into court for enforcement.

"This is the situation of which the carriers complain because experience has shown that, as a practical matter, awards by the Adjustment Board in favor of employees' claims are in fact not taken into court where their legality can be tested, but instead they are enforced by the unions through the exercise of a threat to strike."

The brief cited an instance where the First Division of the Adjustment board, in deciding a case, ordered a railroad to take away certain work from electrical workers and give it to the engineers, whereupon later the electrical workers' organization brought another proceeding before the Second Division of the board which sustained their demands that the work, instead, belonged to them and that they must be paid for the period during which it had been performed by the engineers.

The brief was prepared by a special committee representing the Class I railroads and consisting of John Dickinson, general solicitor, Pennsylvania; William H. Swiggart, general counsel, Nashville, Chattanooga & St. Louis; Bruce E. Dwinell, general attorney, Chicago, Rock Island & Pacific, and Eldon M. Martin, general solicitor, Chicago, Burlington & Quincy. It was filed with the Attorney General's Committee on Administrative Procedure in answer to certain arguments made by representatives of railroad labor

in connection with hearings before the Attorney General's Committee on June 26, 1940, regarding Monograph No. 17, which dealt with present procedure of the National Railroad Adjustment Board. Mr. Dickinson at that time made a statement before the Attorney General's Committee presenting the views of the railroads regarding the board's procedure, details of which were given in the *Railway Age* of June 29, page 1185.

Loss and Damage Payments Increase

Loss and damage payments made by Class I railroads during the first six months of 1940 increased 14.1 per cent as compared with the same period last year, according to figures compiled by the Freight Claim Division of the Association of American Railroads. The total for the period was \$10,484,254 in 1940 and \$9,185,333 in 1939, an increase of \$1,298,921. Fresh fruits, melons and vegetables in the first half of 1940 totaled \$2,156,622 compared with \$1,880,421 in the same period last year, an increase of 14.7 per cent.

Shippers' Boards Forecast 7% Rise in Car Loadings

Freight car loadings in the fourth quarter of 1940 are expected to be about seven per cent above actual loadings in the same quarter in 1939, according to estimates compiled by 13 Shippers' Advisory Boards. On the basis of those estimates, freight car loadings of the 29 principal commodities will be 6,511,835 cars in the fourth quarter of 1940, compared with 6,084,567 actual car loadings for the same commodities in the corresponding period in the preceding year.

All of the 13 Shippers' Advisory Boards estimate an increase in carloadings for the fourth quarter of 1940, compared with the same period in the preceding year.

The tabulation below shows actual carloadings for each district in the fourth quarter of 1939, the estimated loadings for the fourth quarter of 1940, and the percentage of increase or decrease.

Shippers' Advisory Boards	Actual Loadings Fourth Quarter 1939	Estimated Loadings Fourth Quarter 1940	Per Cent Increase
New England	109,089	112,288	2.9
Atlantic States	613,789	684,657	11.5
Allegheny	965,377	998,142	3.4
Ohio Valley	707,211	711,644	0.6
Southeast	642,665	710,278	10.5
Great Lakes	493,943	518,147	4.9
Central Western	221,080	234,265	6.0
Mid-West	850,811	915,938	7.7
Northwest	383,805	466,775	21.6
Trans-Missouri-Kansas	307,386	319,770	4.0
Southwest	362,664	383,764	5.8
Pacific Coast	223,818	241,762	8.0
Pacific Northwest	202,929	214,405	5.7
TOTAL	6,084,567	6,511,835	7.0

The 13 Shippers' Advisory Boards, according to the estimate, expect an increase in the fourth quarter of 1940, compared with the same period one year ago, in the loading of all of the 29 principal commodities with the exception of grain, for which a decrease of six per cent is expected; sugar, syrup and molasses, a reduction of 3.1 per cent; and fresh fruits other than citrus fruits, a reduction of two-tenths of one per cent. Among the commodities expected to show the greatest increases are the following: Automobiles, trucks and parts, 22.1 per cent; ore and concentrates,

20.6 per cent; machinery and boilers, 19.9 per cent; lumber and forest products, 15.1 per cent; agricultural implements and vehicles other than automobiles, 14.4 per cent; iron and steel, 11.1 per cent; canned goods, 10.5 per cent; chemicals and explosives, 9.4 per cent; paper, paper board and prepared roofing, 7.4 per cent; gravel, sand and stone, 7.3 per cent; citrus fruits, seven per cent; cement, 6.7 per cent; potatoes, 6.1 per cent; brick and clay products, six per cent; and coal and coke, 3.9 per cent.

Moving Day for the L. & N. E.

The Lehigh Coal & Navigation Co. and its affiliated Lehigh & New England announced the removal of general offices to the Fidelity-Philadelphia Trust Building, 123 South Broad street, Philadelphia, Pa., effective October 1.

G. M. & N. Affiliate Seeks I. C. C. Authority

The Gulf Transport Company, a motor carrier affiliate of the Gulf, Mobile & Northern, has asked the Interstate Commerce Commission for authority to purchase certain properties of Thomas C. Reed, doing business as McDonald & Elington Freight Line of Montgomery, Ala.

Western Tax Commissioners to Meet October 8

The Western Association of Railway Tax Commissioners will hold its next regular meeting at the De Soto Hotel, St. Louis, Mo., on October 8, convening at 9 a. m. A feature of the program will be an address by one of the leading railroad attorneys of St. Louis on problems confronting railroad utilities.

Streamlined "400" a Year Old

The completion of one year's operation of the streamlined "400" between Chicago and the Twin Cities was celebrated by the Chicago & North Western on September 24 when a large "birthday cake" was exhibited at the terminal in Chicago. During the year the train has traveled more than 300,000 miles. In 11 months ending in August, the train carried 203,335 passengers, an increase of 46 per cent compared with the corresponding period a year ago when the train consisted of standard equipment.

Santa Fe to Operate Fan Tour

An all expense tour, sponsored by rail fan clubs, camera clubs and the Model Builders Club of Chicago, will be operated by the Atchison, Topeka & Santa Fe from Chicago to Kansas City, Mo., and return on October 25 to 27. The party will travel to Kansas City on the "Scout" and return on the "Chicagoan." At Kansas City the fans will be divided into two groups, one of which will tour the countryside by bus while the other visits the shops and roundhouses of the railroads in Kansas City.

N. Y. C. to Inaugurate Grand Central

A new 17-hr. Chicago-New York train, to be known as the Grand Central, will be placed in service by the New York Central

on September 29. It will be an all-Pullman train of streamlined equipment and will contain all types of sleeping accommodations, including open sections, roomettes, bedrooms, compartments and drawing rooms. It will leave Chicago at 2:30 p. m. and will arrive in New York at 8:30 a. m. Returning, the equipment will be used on the Commodore Vanderbilt.

Freight Car Loading

Revenue freight car loading for the week ended September 21 totaled 813,329 cars the Association of American Railroads announced on September 26. This was an increase of 9,020 cars, or 1.1 per cent, above the preceding week an increase of 3,577 cars, or 0.4 per cent, above the corresponding week last year and an increase of 143,625 cars, or 21.4 per cent, above the comparable 1938 week.

As reported in last week's issue, loading of revenue freight for the week ended September 14 totaled 804,309 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading			
For Week Ended Saturday, September 14			
Districts	1940	1939	1938
Eastern	163,069	166,516	133,480
Allegheny	170,750	154,637	118,916
Pocahontas	51,627	55,278	50,071
Southern	107,583	114,088	100,276
Northwestern ..	141,572	125,571	94,301
Central Western	116,577	125,257	109,452
Southwestern ..	53,131	59,084	53,667
Total Western Districts	311,280	309,912	257,420
Total All Roads	804,309	800,431	660,163
Commodities			
Grain and grain products	42,494	50,112	35,896
Live stock	17,379	19,384	16,728
Coal	140,159	149,682	121,411
Coke	11,148	8,754	5,740
Forest products ..	40,434	35,137	30,986
Ore	73,645	56,454	27,446
Merchandise l.c.l.	156,442	162,856	156,808
Miscellaneous ..	322,608	318,052	265,148
September 14 ..	804,309	800,431	660,163
September 7 ...	695,258	662,357	568,707
August 31	768,821	716,397	648,029
August 24	761,002	683,906	620,557
August 17	743,121	669,793	597,884
Cumulative Total, 37 Weeks ...	24,950,064	22,646,496	20,772,543

In Canada.—Carloadings for the week ended September 14 totaled 61,779, compared with 71,274 a year ago and 55,361 for the previous week, which contained a holiday, according to the weekly summary of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
Sept. 14, 1940	61,779	26,143
Sept. 7, 1940	55,361	21,533
Aug. 31, 1940	60,484	24,100
Sept. 16, 1939	71,274	25,424
Cumulative Totals for Canada:		
Sept. 14, 1940	1,920,581	899,312
Sept. 16, 1939	1,689,939	749,060
Sept. 17, 1938	1,665,029	740,786

New Fourth-Section Procedures

The Interstate Commerce Commission, Division 2, on September 19 issued a notice to outline a temporary procedure to be followed with respect to that provision of the Transportation Act of 1940 which amends the Interstate Commerce Act's fourth section to expedite procedures by providing that tariffs carrying proposed rates may be filed simultaneously with ap-

plications for relief from the long-and-short-haul or the aggregate-of-intermediates clauses, and that if such applications for relief are granted the commission shall permit the tariffs to become effective on one day's notice.

The commission notice sets up a brief form and gives brief instructions for the filing of the tariffs which may become involved—"pending modification of the commission's Rules of Practice and applicable tariff circulars."

Practitioners Meet at Chicago October 10-11

Joseph B. Eastman, chairman of the Interstate Commerce Commission; James M. Landis, dean of Harvard Law School; Luther M. Walter, co-trustee of the Chicago Great Western, and Chester C. Thompson, president of the government-owned Inland Waterways Corporation, will be speakers at the annual meeting of the Association of Interstate Commerce Commission Practitioners to be held October 10 and 11 at the Palmer House, Chicago.

President Thompson of I. W. C. will speak at October 10's morning session, discussing "The Status of Water Carriers Under the New Legislation." Chairman Eastman of the I. C. C. will speak at the luncheon on the same day, while the afternoon session's program will include Mr. Walter's address. Dean Landis is scheduled to talk on the morning of October 11.

I. C. C. Calls Informal Conference on Southern Classification Cases

The Interstate Commerce Commission has invited parties of record in proceedings growing out of the reductions in Southern territory rail and motor classification ratings to an informal conference at the Biltmore Hotel, Atlanta, Ga., on October 17. The reduced ratings were permitted to become effective September 1, but the investigations continued under Docket Nos. 28550 and MC-C 210.

The invitation to attend the Atlanta conference came in a notice issued by I. C. C. Secretary W. P. Bartel. The general reasons which Mr. Bartel gives for the commission's action in that connection are along the lines of those cited with respect to the similar conference called in the general rate structure and classification investigations, as noted elsewhere in this issue. Also, as in the other case, Mr. Bartel emphasizes how such prehearing conference "must be conducted in an atmosphere of complete candor and freedom of expression. . . ."

N. Y. C. Legionnaires Christen Model "F. E. Williamson"

A one-tenth scale model of a United States Navy destroyer of the "400" series constructed by members of the Commodore Vanderbilt Post 1158 of the American Legion, all of whom are employees of the New York Central, was named the "F. E. Williamson," in honor of the president of the road, in a christening by Mrs. Williamson at the New York Central building, New York, on September 21, amidst ceremonies marked by flags, uniforms and band music. A duplicate of the "McCall," one of the speedy modern series of destroyers, the model is 31 ft. in length and

has a beam of 7 ft. 1 in. On its bows it bears the number 466, the address of the Central's general offices at Lexington Avenue, New York. Legionnaires, with the assistance of railroad shopmen, constructed the model in the Harmon shops on Saturday afternoons and Sundays.

U. S. Chamber Will Continue Work on Transportation Problems

While the Transportation Act of 1940 completes the work of carrying out the "main planks" in the transportation platform of the Chamber of Commerce of the United States, that body nevertheless recognizes that "there are numerous transportation problems remaining and these will receive continued consideration" by the Transportation Committee, according to the latest issue of the Chamber's "Washington Review."

The new act, the Review says, "is a forward step which has had widespread support from business organizations. It rounds out a program of transportation legislation which the Chamber has consistently favored." After brief reference to the act's main provisions and to other recent transport legislation favored by the Chamber, the statement recalls how "The Chamber has taken the attitude that effort should be concentrated on work for completion of the existing transportation program rather than complicating it with a variety of new questions." Then comes the aforementioned reference to work still to be done.

Atlantic States Board to Meet October 2-3

The Atlantic States Shippers Advisory Board will hold its 53rd regular meeting at the Seneca Hotel, Rochester, N. Y., on October 2 and 3. Committee meetings will be held on the first day, ending with an open meeting of the Freight Loss & Damage Prevention committee, which is designed to be especially helpful to traffic and shipping clerks, packers, drivers, purchasing agents, o. s. & d. clerks, platform employees and all others engaged in the physical handling of freight shipments. Discussions will include one on stop-off cars with particular reference to responsibility for re-bracing the load at each stop-off point and suggestions for improvements in shipping practices by members of various carriers and bureaus.

At the regular meeting on October 3, in addition to routine committee reports and business, there will be special reports with respect to national defense, recent legislation, emergency transportation and observations regarding ways and means of improving less carload service. The board will be addressed at its luncheon by H. C. Spillman of the National Association of Manufacturers on the subject: "The Future of America."

Bill Would Segregate All Oil and Gas Taxes

Representative Secrest, Democrat of Ohio, has introduced in the House H. R. 10523, a bill providing for the apportionment among the states for road construction of all funds derived from any federal tax on the sale of gasoline or lubricating

oils. The bill provides that beginning with the first quarter after the date of enactment all amounts derived from any federal tax on the sale of gasoline or lubricating oils shall be deposited in a special fund in the Treasury to be known as the "Road-Aid Fund". The amount accumulated in this fund in each quarter would be apportioned at the end of the quarter among the states by the Federal Works Administrator according to the ratios used in apportioning federal road-aid funds pursuant to section 21 of the Federal Highway Act.

It is also stipulated that the amounts apportioned to each state shall be made available to that state for expenditure, according to regulations prescribed by the Federal Works Administrator, on state

highway projects approved under the Federal Highway Act. Such funds would have to be matched by state funds under the Federal Highway Act in the same manner as are other funds expended by the state on approved projects under the act. Another provision of the measure states that not in excess of 60 per cent of any amount distributed to any state in any quarter under the bill shall be expended on the primary or interstate system of federal roads in a state.

June's Net Income Was \$7,049,558

Class I railroads reported for June a net income after fixed charges of \$7,049,558, as compared with a net deficit of \$1,264,-

SELECTED INCOME AND BALANCE-SHEET ITEMS OF CLASS I STEAM RAILWAYS

Compiled From 132 Reports (Form IBS) Representing 137 Steam Railways
(Switching and Terminal Companies Not Included)

TOTALS FOR THE UNITED STATES (ALL REGIONS)

For the month of June		For the six months of	
1940	1939	1940	1939
Income Items			
\$47,484,657	\$39,166,783	\$242,432,055	\$165,623,213
14,705,250	13,492,219	68,962,017	66,893,963
62,189,907	52,659,002	311,394,072	232,517,176
2,358,290	2,044,259	13,011,613	11,828,937
59,831,617	50,614,743	298,382,459	220,688,239
11,870,161	11,369,653		
38,819,501	38,416,653		
129,119	132,216		
50,818,781	49,918,522		
9,012,836	696,221		
1,963,278	1,961,167		
7,049,558	*1,264,946		
17,143,554	16,805,486		
5,129,554	2,132,377		
2,039,208	2,451,532		
340,746	672,617		
Income Items			
1. Net railway operating income.....		\$242,432,055	\$165,623,213
2. Other income		68,962,017	66,893,963
3. Total income		311,394,072	232,517,176
4. Miscellaneous deductions from income		13,011,613	11,828,937
5. Income available for fixed charges		298,382,459	220,688,239
6. Fixed charges:			
6-01. Rent for leased roads and equipment		67,139,614	66,574,862
6-02. Interest deductions†		230,704,963	231,568,987
6-03. Other deductions		776,633	798,381
6-04. Total fixed charges		298,621,210	298,942,230
7. Income after fixed charges		*238,751	*78,253,991
8. Contingent charges		11,794,875	11,769,703
9. Net income‡		*12,033,626	*90,023,694
10. Depreciation (Way and structures and Equipment)		102,055,501	100,950,683
11. Federal income taxes		21,660,675	9,474,945
12. Dividend appropriations:			
12-01. On common stock		36,786,230	34,672,276
12-02. On preferred stock		9,568,822	9,446,493
Balance at end of June			
Selected Asset Items			
13. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)		\$599,914,535	\$636,370,943
14. Cash		479,367,157	430,302,330
15. Demand loans and deposits		26,278,583	15,818,855
16. Time drafts and deposits		27,086,224	20,838,102
17. Special deposits		131,846,406	71,212,040
18. Loans and bills receivable		1,961,119	1,498,419
19. Traffic and car-service balances receivable		60,959,319	54,424,102
20. Net balance receivable from agents and conductors		49,643,789	46,674,290
21. Miscellaneous accounts receivable		122,669,701	116,853,707
22. Materials and supplies		351,336,854	318,849,539
23. Interest and dividends receivable		20,841,608	17,912,065
24. Rents receivable		1,403,801	1,271,888
25. Other current assets		6,302,403	6,228,835
26. Total current assets (items 14 to 25).....		\$1,279,696,964	\$1,101,884,172
Balance at end of June			
Selected Liability Items			
27. Funded debt maturing within 6 months§		\$148,821,071	\$188,494,605
28. Loans and bills payable¶		177,441,113	212,683,918
29. Traffic and car-service balances payable		80,487,195	76,113,573
30. Audited accounts and wages payable		225,742,524	222,866,024
31. Miscellaneous accounts payable		70,556,677	71,711,680
32. Interest matured unpaid		49,446,074	50,063,089
33. Dividends matured unpaid		14,322,809	9,390,963
34. Unmatured dividends declared		4,293,240	4,293,297
35. Unmatured interest accrued		71,687,685	71,653,641
36. Unmatured rents accrued		16,510,929	17,378,933
37. Other current liabilities		78,883,045	33,717,602
38. Total current liabilities (items 28 to 38).....		\$789,365,291	\$769,872,720
39. Tax liability (Account 771):			
39-01. U. S. Government taxes		85,070,860	55,017,951
39-02. Other than U. S. Government taxes		138,628,338	156,251,604

* Deficit or other reverse items.

† Represents accruals, including the amount in default.

‡ For 99 railroads not in receivership or trusteeship the net income or deficit was as follows: June 1940, \$17,387,346; June 1939, \$11,331,691; 6 months 1940, \$49,344,895; 6 months 1939, \$15,249,751.

§ Includes payments of principal of long-term debt (other than long-term debt in default) which will become due within six months after close of month of report.

¶ Includes obligations which mature not more than 2 years after date of issue.

§ 1939 figures for certain liability items have been revised, for comparative purposes, to conform with changes prescribed in the Uniform System of Accounts by Commission's order of December 6, 1939, effective January 1, 1940.

NET INCOME OF LARGE STEAM RAILWAYS (Switching and Terminal Companies Not Included)

Name of Railway	Net income after deprec.		Net income before deprec.	
	For the six months of 1940	1939	For the six months of 1940	1939
Alton R. R.	\$1,194,690	\$969,034	\$1,064,629	\$840,717
Atchison, Topeka & Santa Fe Ry. System [†]	1,672,562	3,137,210	4,269,146	2,774,958
Atlantic Coast Line R. R.	1,142,845	84,757	119,895	1,133,122
Baltimore & Ohio R. R.	1,150,433	6,346,753	2,447,465	2,756,391
Boston & Maine R. R.	98,582	647,353	627,743	129,690
Central of Georgia Ry. [†]	1,251,831	1,479,852	825,098	1,053,897
Central R. R. of New Jersey [†]	1,808,353	2,124,708	1,106,462	1,424,151
Chesapeake & Ohio Ry.	16,282,529	5,958,114	20,499,236	10,084,864
Chicago & Eastern Illinois Ry. [†]	994,747	1,035,369	692,072	738,409
Chicago & North Western Ry. [†]	6,707,535	9,279,936	4,233,969	6,803,741
Chicago, Burlington & Quincy R. R.	2,175,452	1,957,978	446,244	647,044
Chicago Great Western R. R. [†]	607,497	547,576	326,606	278,784
Chicago, Milwaukee, St. Paul & Pacific R. R. [†]	8,296,588	11,298,024	5,332,899	8,405,259
Chicago, Rock Island & Pacific Ry. [†]	5,338,450	6,034,341	3,272,301	3,981,807
Chicago, St. Paul, Minneapolis & Omaha Ry.	1,726,592	1,947,064	1,442,746	1,656,839
Delaware & Hudson R. R.	514,852	489,395	1,042,152	996,939
Delaware, Lackawanna & Western R. R.	420,001	852,976	799,657	366,765
Denver & Rio Grande Western R. R. [†]	3,030,319	3,369,317	2,407,845	2,764,888
Elgin, Joliet & Eastern Ry.	1,201,955	552,258	1,687,521	1,031,031
Erie R. R. (including Chicago & Erie R. R.) [‡]	1,651,546	2,646,820	168,653	808,806
Grand Trunk Western R. R.	12,696	1,539,341	606,273	957,236
Great Northern Ry.	660,714	3,394,082	1,184,011	1,547,743
Illinois Central R. R.	1,759,375	1,548,312	1,427,401	1,750,896
Lehigh Valley R. R.	612,987	510,203	430,950	548,849
Long Island R. R.	1,609,966	1,302,312	1,025,055	713,856
Louisville & Nashville R. R.	3,572,580	1,372,551	5,745,100	3,538,687
Minneapolis, St. Paul & Sault Ste. Marie Ry. [†]	3,069,351	4,035,053	2,456,817	3,425,561
Missouri-Kansas-Texas Lines	1,971,057	2,207,118	1,375,595	1,538,859
Missouri Pacific R. R. [†]	7,400,640	8,551,939	5,155,082	6,372,568
New York Central R. R. [†]	576,136	9,079,066	7,382,841	1,156,479
New York, Chicago & St. Louis R. R.	547,894	121,945	1,341,878	663,264
New York, New Haven & Hartford R. R. [†]	3,162,454	2,775,776	1,508,871	1,084,953
Norfolk & Western Ry.	15,719,876	8,680,572	18,826,491	11,195,599
Northern Pacific Ry.	2,366,477	5,036,650	681,652	3,344,947
Pennsylvania R. R.	11,296,274	4,175,100	24,756,722	17,344,468
Pere Marquette Ry.	343,930	656,176	1,485,223	528,058
Pittsburgh & Lake Erie R. R.	1,756,733	511,604	2,850,627	1,633,041
Reading Co.	2,309,916	1,416,261	3,835,386	2,971,695
St. Louis-San Francisco Ry. [†]	5,342,077	5,863,837	3,819,906	4,326,576
St. Louis, San Francisco & Texas Ry.	177,609	137,536	177,470	137,120
St. Louis Southwestern Lines [†]	264,919	1,197,753	52,635	888,691
Seaboard Air Line Ry. [†]	2,515,984	2,926,703	1,349,493	1,851,103
Southern Ry.	1,038,471	23,191	2,802,710	1,747,049
Southern Pacific Transportation System	3,775,728	3,046,386	192,335	893,830
Texas & Pacific Ry.	434,263	40,746	1,039,844	559,842
Union Pacific R. R. (including leased line)	3,858,664	2,936,535	7,655,172	6,657,065
Wabash Ry. [†]	2,451,734	3,152,774	1,372,009	2,079,954
Yazoo & Mississippi Valley R. R.	204,439	420,519	39,938	187,190

* Deficit.

† Report of receiver or receivers.

‡ Under trusteeship, Erie R. R. only.

§ Includes Atchison, Topeka & Santa Fe Ry., Gulf, Colorado & Santa Fe Ry., and Panhandle & Santa Fe Ry.

|| Includes Boston & Albany, lessor to New York Central R. R.

Includes Southern Pacific Company, Texas & New Orleans R. R., and leased lines. The report contains the following information: "Figures reported above for Southern Pacific Transportation System exclude offsetting debits and credits for rent for leased roads and equipment, and bond interest, between companies included therein. Operations for 1940 of separately operated Solely Controlled Affiliated Companies (excluding results for Southern Pacific Railroad Company of Mexico), not included in above statement, resulted in a net deficit of \$399,006 for the month and \$2,749,869 for the period. These results include \$213,048 for the month and \$1,269,843 for the period, representing interest on bonds of such companies owned by Southern Pacific Company not taken into income by S. P. Co. and, therefore, not included in the 1940 income results for the System reported above. The combined results for 1940 for Southern Pacific Transportation System and separately operated Solely Controlled Affiliated Companies (excluding S. P. R. Co. of Mexico) amounted to a net income of \$607,920 for the month and a net deficit of \$5,255,754 for the period. Figures herein given exclude results of S. P. R. Co. of Mexico for the reason that policy was adopted January 1, 1940 of making no further advances to that company, it being required to conduct its operations entirely within its own resources."

946 in June, 1939, according to the Interstate Commerce Commission's monthly compilation of selected income and balance sheet items. The net deficit for this year's first six months was \$12,033,626 as compared with a red figure of \$90,023,694 for 1939's first half.

Fifty-five railroads reported net incomes for June while 74 reported net deficits; in June, 1939, there were 47 net incomes and 82 deficits. For this year's first half, 57 roads reported net incomes and 72 had deficits, as compared, respectively, with 49 net incomes and 80 deficits in the first six months of 1939. The consolidated statement and that showing net incomes or deficits of roads having annual operating revenues above \$25,000,000 are given in the accompanying tables.

July Locomotive Shipments

July shipments of railroad locomotives totaled 30 as compared with 39 in June and 23 in July, 1939, according to reports

received by the Department of Commerce's Bureau of the Census from the country's builders. Shipments during this year's first seven months totaled 273 locomotives as compared with 162 during the same period last year. Meanwhile unfilled orders as of July 31 totaled 232 locomotives as compared with 146 on June 30 and 150 at the end of July last year.

The aforementioned 30 locomotives shipped in July included seven steam locomotives, 22 Diesel-electrics and one other type, all for domestic service; the 273 shipped during 1940's first seven months included 33 steam, 198 Diesel-electrics and 10 of other types for domestic service and 32 steam for export. The unfilled orders at the end of July included 87 steam, 117 Diesel-electrics and five of other types for domestic service, and 23 steam for export.

Data supplied by the Car Service Division, Association of American Railroads, on locomotive building in railroad shops show that five locomotives (four steam and

one electric) were thus built in July, as compared with three (all steam) in July, 1939. During this year's first seven months, railroad shops produced 47 locomotives, including 29 steam and 18 electric; in the comparable 1939 period 30 locomotives (13 steam and 17 electric) were built. As of August 1, railroad shops had unfilled orders for eleven locomotives (nine steam and two electric) as compared with unfilled orders for 17 (all steam) on August 1, 1939.

Seven-Months Air Travel

Revenue passengers carried by domestic air lines during the first seven months of this year increased 65.45 per cent—from 862,658 to 1,427,305—over the same period last year, according to figures just released by the Civil Aeronautics Authority. Meanwhile the load factor improved 8.99 per cent, with the result that the aforementioned 65.45 per cent more passengers were served with an increase of only 32.24 per cent in the revenue miles flown and a rise of only 47.97 per cent in the passenger seat-miles. The revenue passenger load factor during this year's first seven months was 58.68 per cent as compared with 53.84 per cent last year.

Express carried increased 31.33 per cent, i. e., from 4,767,681 lb. in the first seven months of 1939 to 6,261,209 lb. during the comparable period of this year. Express pound-miles were up only 26.53 per cent, indicating shorter hauls.

Interlocking and Block Definitions to Cover New Techniques

Recommended changes in definitions of "interlocking" and "block" in the Standard Code of Block Signal and Interlocking Rules have been approved by member railroads of the Operating Section, Association of American Railroads, according to J. C. Caviston, secretary, on behalf of the Committee on Operating Rules, W. R. Triem, general superintendent telegraph, Pennsylvania, chairman.

As shown in comparison with present definitions on page three of the paper-covered edition of Block Signal and Interlocking Rules adopted in November, 1938, the new definitions as adopted are merely an expansion of the older to permit the inclusion of new signaling and control devices. The old and new definitions follow:

Old—Interlocking.—An arrangement of signal appliances so interconnected that their movements must succeed each other in a pre-determined order. It may be operated manually or automatically.

New—Interlocking.—An arrangement of signals and signal appliances so interconnected that their movements must succeed each other in proper sequence and for which interlocking rules are in effect. It may be operated manually or automatically.

Old—Block.—A length of track of defined limits, the use of which by trains is governed by block signals.

New—Block.—A length of track of defined limits, the use of which by trains is governed by block signals, cab signals, or both.

Western District on "Close Margin" for Box Cars

The result of September's lumber traffic and heavy seasonal commodity movements in Western territory has been "a serious drain on the Western box car supply, attended by some very tight local situations, and putting the entire Western district on

a close margin for box cars," according to an Association of American Railroads "Mailgram" sent out to Eastern and South-eastern roads on September 23 by L. M. Betts, manager of the Car Service Division's Closed Car Section. The situation, Mr. Betts said, justifies specific action to prevent any loading of Western cars away from home direction, any holding of such cars for prospective loading, or any use of them for local short-haul loading, even in homeward direction. On the other hand it is suggested that such cars should be used only for home destination merchandise loading; and that their return to home roads should be expedited in every practical way.

"Give particular attention," Mr. Betts continued, "to cars of the large 'interior' and distant Western ownerships—GN, NP, SP, UP, WP, etc." Previously he had stressed how "the need is particularly acute for 50-ft. and high 40-ft. box [cars], especially in Pacific Coast territory." Much of the aforementioned lumber traffic is identified as materials "for cantonment and other national defense projects in the East and Southeast"; while the heavy commodity movements have been of wheat, corn and soybeans. Action along the recommended lines, the "Mailgram" message said in closing, "is particularly important during the next 30 days of heaviest seasonal box car requirements, after which it is more than likely that normal procedure under the Car Service Rules should suffice."

Standard Time Brings Important Train Changes

Concurrent with the return of standard time in urban areas on Sunday morning, September 29, a number of important changes and improvements in services will go into effect in addition to routine time-table changes to conform with turned-back clocks. The Pennsylvania and New York, New Haven & Hartford will establish a new service in both directions between Philadelphia, Pa., and Boston, Mass., with through coaches to Springfield, Mass. The northbound train, known as the Bay State, will leave Philadelphia at 8 a. m. and arrive in Boston at 2:40 p. m. Southbound, called the William Penn, it will leave the "Hub city" at 6 p. m. and arrive in Philadelphia at 12:30 a. m.

To increase its attractiveness as a train from Pittsburgh to New York, departure of the eastbound all-coach "Trail Blazer" from Chicago will be advanced from 3:20 p. m. to 1:30 p. m., making departure from Pittsburgh at 10:50 p. m., or two hours earlier than at present, and giving arrival in New York at 7:30 a. m. The westbound American will continue on its present terminal-to-terminal schedule between New York and St. Louis, but will operate via Dayton, Ohio, instead of Bradford. This will provide an additional over-night service to Dayton with arrival at 10:51 a. m.

The New York Central will add a new all-Pullman, 17-hr. train called "The Grand Central" to its fleet from Chicago to New York to supplement the Commodore Vanderbilt and meet demand for fast service with earlier arrival in New York. The

new run will leave Chicago at 2:30 p. m. and arrive in New York at 8:30 a. m. The Fifth Avenue Special will leave Chicago ten minutes later than at present, while the westbound Empire State Express will shorten its schedule by 10 min.

Cincinnati's Commercial Zone

The Interstate Commerce Commission, Division 5, has defined the Cincinnati, Ohio, commercial zone wherein motor vehicle operations will be exempt from regulation under the Motor Carrier Act's provisions, except those relating to safety. Excluded from the exemption are vehicles operated under a common arrangement for transportation to or from a point beyond the zone.

The decision in Ex Parte MC-20 defines the zone as follows: "The area within the corporate limits of Cincinnati, Cleves, North Bend, Addyston, Cheviot, Elmwood Place, St. Bernard, Norwood, Springfield Township, and Sycamore Township, Ohio,

* * *



Photo by G. Morris Taylor, Jasper, Alta.

Bear in the Beltry

This photograph, taken by a member of the Canadian National Staff at Jasper, Alta., shows a fair-sized black bear discovered one morning on the shopping runway 16 ft. above the floor of the machine shop of the Jasper enginehouse where he had gone to get warm during the night. Since Jasper is located in a national park and game sanctuary the presence of such animals in the nearby countryside is not unusual, but this is the first Bruin to have made a roundhouse the scene of his meditations.

and Covington and Newport, Ky., that portion of Kenton County, Ky., lying on and north of a line commencing at the intersection of the Boone-Kenton county line and the Dixie Highway, thence over the latter to Covington, and that portion of Campbell County, Ky., lying on and north of a line commencing at the south corporate limit of Newport, thence over Licking Pike to junction of Johns Hill Road, thence over the latter to junction of Alexandria Pike, thence over the latter to junction of county road, thence over the latter to the Ohio River, including communities in Kenton and Campbell Counties on the described lines."

Informal Meeting on General Probes

(Continued from page 450)

it, the effectiveness of the order has been deferred from time to time so that the time and expense necessarily involved in the end shall be applied to best advantage. It now stands suspended until December 1, 1940 [as noted above]. The Commission has before it two drafts of a proposed order to take the place of the outstanding order of January 9, 1940, which are reproduced as annexes to this notice. It will be observed that one embraces all traffic, carload and less-than-carload, but calls for more detailed information as to class-rate traffic than for bulk commodities, such as coal, grain, and lumber, which generally move on commodity rates, while the other is confined to less than carload traffic. Considering both the time and expense involved, and the utility when compiled, should an order of the character of either of these drafts be promulgated; if so, which order is preferable, and what modifications, if any, are desirable?

3. To what extent will the development of the record be facilitated if the staff of the Commission shall make available for the record such cost of service studies, recommendations as to classification, and class-rate scales, as studies of the staff shall indicate to them as proper for consideration, in the same manner that reports of the Bureau of the Commission are now employed in railway reorganization proceedings under section 77 of the Uniform Bankruptcy Act?

4. The following are among the questions which will inevitably require consideration:

(a) Whether class-rate scales shall be provided for both carload and less than carload traffic, or separate scales for each; the number of classes; their gradation; their relation between themselves;

(b) Whether treatment shall be regional or nation-wide, and how and to what extent regional differences shall be reflected in the scales;

(c) The basis for construction of interterritorial scales;

(d) Whether the existing distinction between carload and less than carload traffic shall be replaced by some other, such as carload and merchandise. If the latter, where should the distinction be made?

(e) The propriety of quantity class-rates above or below the customary carload minima, or of class-rates varying with quantity, weight, space occupied, or revenue derived.

(f) Should quantity rates as above mentioned if recognized, be standardized and given some degree of uniformity throughout the territories; and should they be considered as within the field of classification or commodity rate-making? If they are to be treated as matters of classification, should they be treated by specific rule providing for adjustment of the basic rate, according to the quantity shipped? What principles should govern the gradation of the quantities and rates in such cases?

Consideration should be given in the informal conference as to the mode and manner in which these subjects can best be developed at the formal hearings. It is, of course, not the thought that any decision can be reached upon the questions themselves, or others which will suggest themselves, upon the basis of the informal conference.

5. With respect to the procedure, it is desirable to come to some understanding, if possible, and after a full exchange of views, with respect to the time and places for hearings, whether parties in interest can so organize that they will be able to simplify and consolidate their presentations as far as possible; to reach an understanding as to the steps which are feasible for a limitation of the number of witnesses, the distribution to the parties of proposed exhibits and of prepared statements of fact; and of the matters within the files of the Commission or other

public documents which may be made available for the record without formal proof.

"It should be emphasized," Secretary Bartel says in closing, "that the prehearing conference contemplated must be conducted in an atmosphere of complete candor and freedom of expression, with the intent on the part of all concerned to endeavor to simplify and shorten a proceeding which will at the very best, be long and laborious. All concerned should enter the conference with the express understanding that neither can they take advantage of the fact that a statement or concession is made by any other party, either in this or in any other proceeding before the Commission or elsewhere, nor that any advantage can be taken by such other parties of anything which they may say. In other words, the conference, being in the way of peace, is to be regarded as privileged. An exception must be recognized where the basis for a stipulation is reached. A record will be made for the convenience of the Commission and the parties, but only for that purpose, and the ultimate decision of the Commission will, as the law requires, be based upon the record developed in the open hearings.

"As it is probable not all who would desire to participate in such a conference can attend, the Commission will receive informally, under like conditions with those mentioned in the preceding paragraph, any written communications upon these subjects, which should be prepared in the form outlined in Rule XXI of the Rules of Practice, and filed with the Commission not later than three days before the date set for the conference. It is desirable that 20 copies be furnished for the use of the Commission, and 50 copies for the use of other parties and interested persons."

Deasy Sees Carriers Ready; Scores Federal Control

Dubbing Federal control of the railroads in the first World War "an experiment in organized confusion" and casting aside any doubts whether the railroads are ready to carry a war-time peak, J. F. Deasy, vice-president (operation), Pennsylvania, discussed railroads and national preparedness before the Allegheny Shippers Advisory Board in Youngstown, Ohio, on September 19. In evaluating the car supply of the railroads, the speaker cited his own road which has available a large reserve of cars of all types which "at any time could be substantially increased on short notice by stepping up the repair program." Pointing out that records show that serviceable cars are in control of shippers and receivers about 48 per cent of the time, and that railroads "want to earn their revenues from transportation not from demurrage," he called attention to the opportunity of advisory boards to render particularly valuable aid in keeping cars in circulation.

Using the statistics of his own railroad to show how the railroad plant has been expanded since the last war, the speaker pointed out that the average power of P. R. R. freight locomotives has increased 23 per cent; the average number of cars per freight train, 41 per cent; average freight train speed, 42 per cent, and gross-ton-

miles-per-train-hours, 97 per cent. He also declared that in the last 10 years the Pennsylvania has placed in service 31,500 new freight cars and 322 new locomotives, and made total expenditures on improvements and additions of nearly \$600,000,000.

As for federal control of the railroads, Mr. Deasy asked his hearers to recall that it cost the tax-payers \$1,600,000,000 in direct out-of-pocket losses, "without a single iota of counterbalancing good that anybody has since been able to find." Noting that the railroads "have long been guinea pigs in the field of political experimentation," Mr. Deasy reminded the traffic men that at the close of the last war the roads were returned to private owners "in deplorable physical condition with their essential commercial and vital traffic relationships completely wrecked."

Norris Sees Fair Play As Part of America's Strength

Belief in the American principles of fair play and equal opportunity are one of the greatest factors in the strength of the country and hence its national defense; yet "if we measure this defense factor by the nation's treatment of its railroads, we can find little to warrant an abiding confidence that we, as a nation of individuals, are ready for the trials which loom so menacingly on our horizon." This was the chief note in an address by Ernest E. Norris, president, Southern, before the Winston-Salem Traffic Club, the Southern Traffic League and the Southeast Shippers' Advisory Board at Greensboro, N. C., on September 18.

The speaker first pointed out that railroads are one of the first lines of defense against any threat of "total war." That highway transportation cannot take their place is indicated by the fact that it took 600,000 for-hire motor trucks to handle 3¾ per cent of the nation's total freight traffic in 1938. On this basis it would require 10 million more vehicles to handle the traffic moved by the railroads in that year. "Imagine a fleet of nearly 11 million trucks on the road and almost half of them crawling along the congested highways of the industrial east."

Mr. Norris declared that there is no doubt that the railroads could handle a war-time peak load of traffic. The entire World War load did not exceed 12 per cent of the normal commercial load. Furthermore, every year the volume of freight carried by the roads increases about 62 per cent from the low week of the year to the high week of the year. Last year the volume of freight handled increased 29 per cent in one short period of six weeks.

On the whole, said Mr. Norris, the railroads have been pretty shabbily treated. He believed the reason behind it is that "we have become soft in our attitude toward American ideals . . . we have been too engrossed in our own material progress to give much time or thought to the path taken by government—unless it touched our individual lives or our pocketbooks." Because of this he believed it his duty "to do all in my limited power to bring about a square deal in transportation—as a matter of national defense—and as a proof

that our faith in equality has not been lost."

Steel Industry Ready to Grow

(Continued from page 449)

in turn has led to the establishment of new industries and new fields of employment, both for capital and for men. This is real industrial progress, which can and should go on indefinitely.

"Not so many months ago the charge was made that the steel industry is burdened with excessive steel-making capacity. These critics confused excess capacity with idle capacity. They merely compared ingot production for a year, or the average for a period of years, with the higher ingot capacity figures for the same period. But such a comparison only establishes that some steel making capacity was idle during the particular period. Everyone knows that steel, for the most part, is a basic material used in the further manufacture of some finished product and that the demand for steel is entirely dependent upon general business conditions. This results in those peaks and valleys which are so characteristic of the business cycle.

"The proper function of the steel industry requires that it should be equipped and ready to furnish steel of a constantly improving quality when and as needed by the consuming public. It met these peak demands in 1929, again in 1937, and last week the industry operated at about 92 per cent of ingot capacity. It will be of interest to you to know that our plants in the Chicago district produced a larger tonnage of iron and steel in the month of August than during any other month in their entire history.

"Where would we be today in our ability to carry forward the national defense program, if the steel industry had adopted the philosophy of these critics and had scrapped as 'excess' those parts of its steel making and finishing facilities which were idle in the depression years, or as recently as 1936 or 1938? Before the present emergency is over, it is conceivable that the steel making capacity of the country may be pushed to the very limit to take care of the total demand, unless priorities of some kind are established giving preference to certain lines of activity."

Would Deny I. C. Authority for Motor Operations

The Illinois Central would be denied authority to operate as a common carrier by motor vehicle, of general commodities, except coal, bulk petroleum, and other articles which cannot be conveniently handled by truck, between Fulton, Ky., on the one hand, and Paducah, Ky., and Dyersburg and Jackson, Tenn., on the other hand, and between Memphis, Tenn., and Dyersburg, if the Interstate Commerce Commission adopts a recommended order of its Joint Board No. 25, composed of D. C. Moore of Kentucky and Porter Dunlap of Tennessee.

The proposed report states that the Illinois Central proposes to establish service to and from points on its lines of railroad, in the western portions of Kentucky and Ten-

nessee, using motor vehicles as a substitute for its less-than-carload rail service. The service would be rendered in equipment leased from the Railway Express Agency, Inc.

After voting to recommend denial of the application the Joint Board states that the record shows there are several other motor carriers operating in the territory involved in the proceeding, and that the motor carriers have a large quantity of available space on their operating equipment which could be utilized for the purpose of affording the public a coordinated rail-truck service.

"The joint board believes", continues the decision, "that before a railroad should be authorized to enter the trucking business for the purpose of rendering a coordinated rail-truck service, it should definitely appear that the present truck facilities are inadequate for that purpose, or that the railroad has made a bona fide effort to utilize the present truck facilities to render such service and failed therein due to causes beyond its control. In this proceeding, applicant has failed to meet these tests. It stated definitely that it has not made an attempt to coordinate its services with the existing services of motor carriers and under no consideration would it do so. The record shows that the motor carriers operating in the involved territory are rendering adequate and efficient motor carrier service to shippers and receivers of freight, and that they are presently operating empty motor equipment which could, with the cooperation of applicant, be utilized without much difficulty for the purpose of rendering a coordinated rail-truck service."

Just a "Friendly Meeting" Became an Inspirational Success

Editorial comment and popular acclaim measure the inspirational success of a simple idea of Jerry McCabe, a locomotive

engineman of the Southern Pacific. As president of the S. P. Employees Club 100 of Watsonville, Cal., Mr. McCabe reasoned that the jobs and well-being of its members depend upon the well-being of the railroad; that the well-being of the railroad, in turn, depends upon the community; and that the best thing to do for the well-being of all concerned was to get them together. As a result, on August 21, he got them together—the railroads' officers and employees, townspeople, business people, officeholders, country people, producers and shippers—to talk about transportation. The mayor of Watsonville was at the speakers' table. So was the local chairman of a railroad brotherhood, a division superintendent, a general purchasing agent, and an assistant to the president. These and an assistant general freight agent and the president of the Chamber of Commerce spoke to an audience, among which were a senator, a bank president, newspaper publishers and heads of packing associations.

There was little of the sensational about this meeting. It was a meeting of people meeting people. But its spirit was an inspiration. The Watsonville Morning Sun said: "There is warmth and understanding in a face-to-face meeting, in a hand-clasp and personal word of greeting. More of such gatherings could well be held, for in business and industry, in labor and capital there are all too many conflicting factors which only personal contact can smooth out."

The Watsonville Register-Pajaronian, in awarding the club the bouquet of the week for the most outstanding community accomplishment, said: "Southern Pacific officials, employees and local townspeople got together at an event which further cemented the interests of the community and the railroad company."

The meeting accomplished its purpose—

to bring about a realization among shippers and leading townspeople of the economic and social importance of the railroad. The S. P. now has active S. P. clubs at San Francisco, Sacramento, El Paso, Klamath Falls, Watsonville, San Luis Obispo, Los Angeles and San Jose. Bayshore shops have a Fellowship Club, Yuma a Railway Employees Club, and Ogden an "Old Timers" Club. A number of special musical, athletic, dramatic and sportsmen's organizations exist among employees at various points.

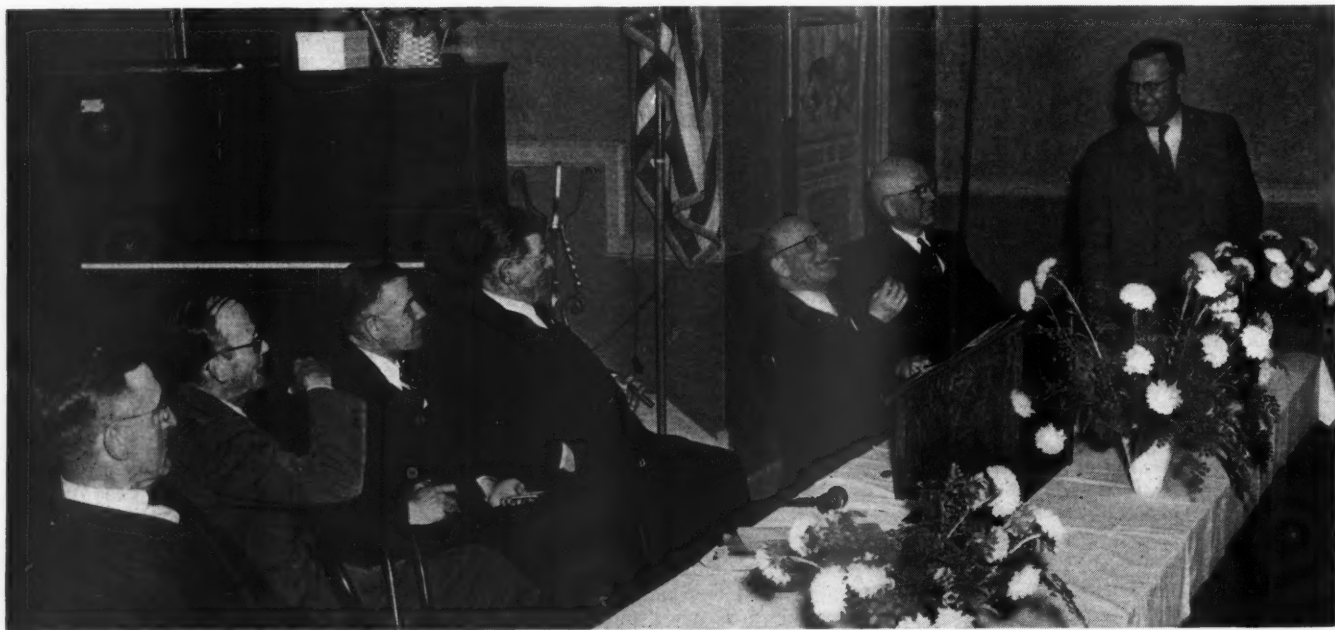
At the meeting on August 21, Mr. McCabe gave a brief outline of the club's history. J. J. Jordan, superintendent of the Coast division, stressed the fact that the entire meeting was in the hands of the employees.

K. C. Ingram, assistant to the president and speaker of the evening, praised the spirit of good fellowship of the gathering. In summary, he said, "It is not a vague ideal with us but a definite policy, stated in writing repeatedly by President McDonald, that our aim is to make our railroad's organization and its service, the friendliest that may be found anywhere." Continuing, he summed up the difficulties facing the railroads and asked everyone's co-operation in demanding equality of treatment with other forms of transportation.

Meticulous Car Rules Wasteful

(Continued from page 451)

Mr. Cleveland calls attention to a provision in pertinent tariffs which fixes minima at a specific figure, "but not to exceed the capacity of the car." This is in tariffs carrying alternative rates on salt prescribed by the commission; and the shipper can use it to claim the lower of



Officers of the S. P. Were Invited by the Employees

Left to right: Guy L. Jennings, local chairman of the Brotherhood of Railroad Trainmen; K. C. Ingram, assistant to the president of the S. P.; Francis J. McCabe, locomotive engineman and president of S. P. Club 100; J. J. Jordan, superintendent; C. H. Baker, mayor of Watsonville; George Betterton, general purchasing agent; and Robert Bowen, president of the Watsonville Chamber of Commerce.

Continued on next left-hand page

COORDINATE . . .

....with New Super Power

Every step of the defense program is based upon coordination. The railroads will once again be called upon to do their part by transporting heavier loads quickly. To meet these demands, Lima is prepared to supply the railroads with the latest super power available. Locomotives of the type that have earned for Lima its reputation of builders of Locomotives high in speed and hauling capacity and low in maintenance



Photo courtesy Southern Pacific Company

LIMA LOCOMOTIVE WORKS



INCORPORATED, LIMA, OHIO

the alternative rates. The "obvious way" to clear up the situation, Mr. Cleveland suggests, is to remove the provision. Generally with respect to the above recommendations on heavy or bulk freight in box cars the Association of American Railroads vice-president sums up the railroad position as follows:

"The railroads are not in accord with the recommendation with reference to heavy or bulk freight in box cars. They will conduct a survey in all territories for the purpose of revising minima on such freight to eliminate reference to capacity and reflect loading capabilities of particular commodities in 36 or 40-ft. cars, such minima to be applicable to the car used without any provision for furnishing longer cars at the minimum for the car ordered and without any provision for a lower minimum when a car shorter than a 36-ft. car is furnished.

Petitions will be filed seeking elimination of the provision in the salt decision with reference to "the capacity of the car" and any other decisions in which similar provisions appear."

For livestock, the I. C. C. committee recommended that the minimum for a double-deck car be twice as great as for a single-deck car, but that first there be a "slight" reduction in the minimum for single-deck cars with no change in the 15 per cent rate differential in favor of double-deck cars. The railroads are not in accord with this suggestion; but "a careful survey will be made in all territories to see that existing practices are covered by tariffs." Also, "there will be effective supervision to make certain that practices at variance with the tariffs are not indulged in and that tariff provisions are applied without discrimination or preference."

Leading up to that statement of the railroad position, Mr. Cleveland pointed out that livestock cannot be held awaiting cars of particular types or capacities—"when shipments are offered they must be transported in such equipment as is available." He added that if the privilege of furnishing two singles in lieu of a double-deck is denied then the total empty mileage will be increased.

"Livestock traffic now moving by rail," the A. A. R. vice-president went on, "is not sufficient to justify additional expenditures to greatly increase the available supply of double-deck cars nor would it justify reconstruction of facilities at country origins. . . . Under present conditions an increase in the minimum for double-deck cars is out of the question because of truck competition. . . . The railroads believe that the result of action such as is recommended by the commission's committee would be to divert a substantial amount of traffic to trucks and for that traffic which remains on the railroads create a situation where double-deck equipment may largely remain idle."

A final recommendation of the commission committee dealt with light and bulky freight for which minima are subject to Rule 34. The recommendation is that the minimum be that for the car accepted and used regardless of what may have been ordered; where two cars are furnished each be treated as a separate unit; and minima

be accurately graduated according to the cubical capacity in lieu of present graduations according to length. Mr. Cleveland finds these recommendations resting upon the theory that the shipper in such cases is interested in space, not length; and he suggests that the commission's committee "apparently is misinformed." The A. A. R. vice-president went on to recall that in 1908 when Rule 34 was under consideration "strong objections" were offered to a proposal to base the rule on cubic capacity instead of length—the objectors pointing out that the "preponderance of freight subject to Rule 34 is floor loaded," i.e., it cannot be tiered because of excess packing and labor costs or damage to the freight. Then Mr. Cleveland followed through with citations of similar views held by present-day shippers. Thus the railroads are not in accord with this suggestion of the I. C. C. committee; but "a careful survey will be made in all territories of the practices with reference to furnishing equipment for Rule 34 freight to make certain that they are in accord with the tariffs, to the end that there shall be no discrimination or preference in application of such tariffs."

Before disposing of the specific recommendations of the I. C. C. committee in the foregoing fashion, Mr. Cleveland had made some general observations on the situations under discussion. "Carload minima," he said, "are designed primarily to utilize available car capacity, thus insuring economical and efficient operation, also to protect car mile earnings on freight for which rates are low in consideration of high minima. Commercial competition, sales units, the character of the commodity and inability of the consignor to load or consignee to take maximum loads control minima on many commodities.

"The railroads are not in a position to incur substantial expense for additional equipment which would be required if practical considerations are disregarded and radical changes made in the direction of modifying existing rules governing furnishing of equipment. The [I. C. C. committee's] report sets forth in some detail the question of truck competition but the recommendations appear to have been worked out without practical regard for such competition.

The situation can be controlled within the industry by close supervision of distribution of equipment.

"In recent years there has been a marked increase in average capacity of freight cars which has not been accompanied by a relative increase in the average load. . . . Increased speed of over the road movement, increased efficiency in handling freight cars in terminals, as well as a small increase in average loading, have enabled the railroads to handle traffic with fewer equipment units. It has been estimated that because of these factors of efficiency a freight traffic level equal to that of 1929 could be handled with 350,000 fewer units than were required at that time. The present ownership (May 1, 1940) of available equipment is 1,642,844 and contrasted with 2,262,909 units at the end of 1929. Adoption of arbitrary rules which may interfere with utilization of available car capacity and demoralize present practices in connection with ordering and furnishing equipment

would adversely affect those factors of efficiency to a material extent."

Final Hearings Held in Minimum Wage Case

Public hearings before Henry T. Hunt, principal hearings examiner of the Wage and Hour Division, United States Department of Labor, the second step in the determination of what wage rate shall be the minimum for the railway industry under the provisions of the Fair Labor Standards Act, were held on September 23 and 24 in Washington, D. C. Generally, it may be said that the railroad industry, and the labor organizations concerned did not ask to have the recommendation of 36 cents an hour for the Class I roads and 33 cents an hour for the short lines set aside, despite the fact that labor felt the minimum to be too low and management too high. However, certain large railroads and some smaller lines challenged the constitutionality of the act and the findings of the industry committee which held exhaustive hearings during the early Spring of this year.

The 36-cent minimum wage for trunk lines was recommended by a committee of 12 members representing the "public," the employees and the employers of the industry, under the chairmanship of Frank P. Graham, president of the University of North Carolina. It has been estimated that the recommendation, if approved by the Administrator of the Wage and Hour Division, Col. Philip B. Fleming, would increase the hourly wage rate of 60,000 of the 1,000,000 employees of the trunk lines, largely maintenance-of-way employees in the South and West, and 5,300 of the total of 60,000 employed by the short lines.

At the conclusion of the two-day hearing before the Administrator's examiner, only one road, the Columbus & Greenville, asked for oral argument, and it was to be later decided by the Administrator whether or not this request would be granted in view of the fact that the other lines and labor decided to rest their cases on the record adduced at the earlier hearing before the industry committee.

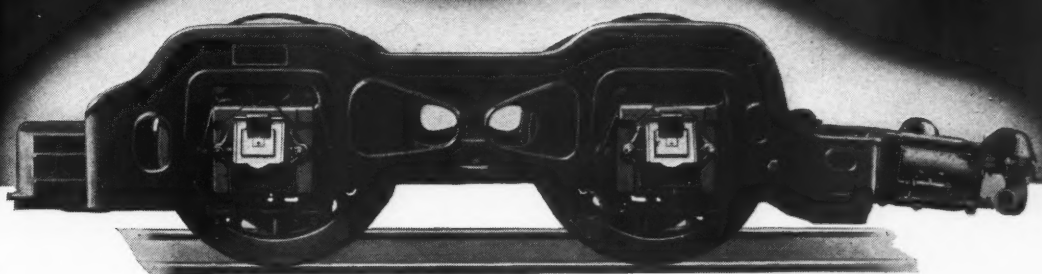
F. H. Moore, general counsel for the Kansas City Southern; J. R. Bell, commerce counsel and general attorney for the Southern Pacific, appearing for the Texas & New Orleans; H. H. Larimore, general attorney and I. C. C. counsel for the Missouri Pacific, appearing for the Texas & Pacific, Gulf Coast Lines, International Great Northern, and Missouri Pacific; and W. S. Walker, general attorney for the Missouri & Arkansas, all challenged the constitutionality of the Fair Labor Standards Act and the validity of the wage recommendation, contending that the 36-cent minimum did not meet the requirement of the act that such a wage rate would "not substantially curtail employment in the railroad industry."

William T. Joyner, attorney for the Association of American Railroads, representing all the Class I roads except those separately appearing at the hearing, and the Norfolk Southern, the Peoria & Pekin Union, and the Virginian, told the examiner that his clients felt the recommended minimum was too high, but that they would not ask to have it set aside.

Russell B. James, assistant general at-

INCREASE YOUR CAPACITY...

...TO HANDLE THE INCREASE IN CARLOADINGS



WITH

BOOSTER^{*} POWER

Carloadings are already on the rise and indications are that they will soon be much higher than they have been in years. To keep up with this rise, railroads will be forced to haul much heavier loads at higher speeds. » » » Progressive railroads are meeting this impending problem the quickest and most economical way . . . by installing Boosters on exist-

ing locomotives! By thus capitalizing idle weight and spare steam the locomotive will have added power to start heavier loads and take them over grades at higher speeds. » » » Booster power is quickly available. Give your locomotives this help against the time when car-loadings will tax your hauling capacity.

*Trade Mark Registered United States Patent Office



FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK
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MONTREAL

torney for the Chicago, Burlington & Quincy, said that his company would oppose the recommendation if it included the motor carrier employees of the road's motor carrier affiliates. A similar position was taken by W. W. Dalton, attorney for the St. Louis-San Francisco. Mr. James also told the examiner that Atchison, Topeka & Santa Fe and the Colorado & Southern would have the same objection to the recommended order. Later, the A. A. R., through one of its attorneys, Bruce E. Dwinell, asked that the same objection be noted for its clients. It was agreed that within two weeks the A. A. R. would submit to the Administrator a sampling of the motor carrier operations of the various railroad companies in order that he might decide whether the motor carrier affiliates come within the meaning of the term "employees of the railroad industry."

The Railway Express Agency, Inc., filed an appearance as "being neither for nor against" the recommendation, but during the hearing introduced a witness, C. J. Jump, a member of the accounting division, who introduced evidence which was intended to correct and further illuminate certain statements in the committee's report dealing with the number of employees of the R. E. A. and the wage rates in effect.

Despite the fact that the labor members of the committee voted in opposition to a 36-cent minimum as being too low and filed a minority report stating that the recommendation should have been 40 cents an hour, Frank L. Mulholland, attorney for the labor organizations, did not ask to have the recommended order set aside.

A similar position was taken by O. David Zimring, attorney for the Amalgamated Association of Street, Electric Railway and Motor Coach Employees of America. John L. Yancey, secretary-treasurer of the United Transport Service Employees of America (formerly the National Brotherhood of Red Caps) wanted the Administrator to specifically include red caps in the definition of employees to be affected by the order to be issued. He was assured by the examiner that such action would be taken in view of the fact that the Interstate Commerce Commission has classified them as employees.

The American Short Line Railroad Association, through its vice president and general counsel, C. A. Miller, indicated that although it felt that 33 cents was too high a minimum for its members, yet it would not ask that the recommended order be set aside. However, a different view was expressed by several short lines.

The Columbus & Greenville stated that its increased operating cost would be \$30,538, and the Georgia & Florida, also appearing in opposition, contended that the approval of the recommended order would "result in confiscation of its property in violation of the Fifth Amendment of the Constitution."

Opposition to the proposed order was also expressed on behalf of the interurban electric lines by C. D. Cass, general counsel of the American Transit Association, who contended that the economist for the Wages and Hour Division, E. B. Mittelman, had presented to the committee an unfair and untrue picture of their financial condition.

Equipment and Supplies

LOCOMOTIVES

THE CHESAPEAKE & OHIO has ordered 10 mallet type locomotives of the 2-6-6-6 type from the Lima Locomotive Works. Inquiry for this equipment was reported in the *Railway Age* of August 24.

THE SOUTHERN has ordered five 1,000-hp., 125-ton, and three 600-hp. 100-ton Diesel-electric switchers from the Electro-Motive Corporation and two 600-hp., 100-ton Diesel-electric switchers from the American Locomotive Company.

FREIGHT CARS

THE UNION PACIFIC is inquiring for 2,000 box cars.

THE LOUISVILLE & NASHVILLE has ordered 500 50-ton hopper cars from the Pullman-Standard Car Manufacturing Company.

DIRECTORS OF THE READING have authorized construction in company shops of 1,000 50-ton hopper cars and 50 caboose cars.

THE UNION PACIFIC has ordered 1,000 50-ton ballast cars from the American Car & Foundry Co. Inquiry for this equipment was reported in the *Railway Age* of July 13, page 92.

THE BUREAU OF SUPPLIES AND ACCOUNTS, NAVY DEPARTMENT, Washington, D. C., is asking for bids by October 4, on three 50-ton box cars and five 50-ton, 40-ft. flat cars for service in Philadelphia, Pa.

THE BUREAU OF SUPPLIES AND ACCOUNTS, NAVY DEPARTMENT, Washington, D. C., is asking for bids by October 4, on 14 or 15 50-ton flat cars with steel underframes and 5 or 6 50-ton steel gondola cars for service in Norfolk, Va.

THE NORFOLK & WESTERN has ordered 1,000 1. s., 55-ton gondola cars, 46 ft. in length. The order has been divided equally between the Virginia Bridge Company and the Ralston Steel Car Company. Inquiry for this equipment was reported in the *Railway Age* of September 21, page 422.

THE SOUTHERN has ordered (subject to I. C. C. approval of financing) a total of 3,230 freight cars divided as follows:

No.	Type	Capacity	Builder
1,500	box	40	Pullman-Standard
750	hopper	50	Pressed Steel
730	H. S. Gondola	50	American Car & Foundry
250	L. S. Gondola	50	Mt. Vernon

Inquiry for this equipment was reported in the *Railway Age* of September 14, page 382.

THE PERE MARQUETTE has ordered 600 freight cars, placing 200 50-ton box cars with the American Car & Foundry Company, 150 50-ton box cars with the General American Transportation Corpora-

tion, 150 50-ton box cars with the Pullman-Standard Car Manufacturing Company and 100 50-ton auto-furniture cars with the Greenville Steel Car Company. The railroad expects to issue an inquiry for 200 70-ton mill type gondola cars.

PASSENGER CARS

THE ILLINOIS CENTRAL expects to order two rail motor cars from the American Car & Foundry Company. The cars will be used as a two-car train that will make a daily round trip between Waterloo, Iowa, and Chicago on a schedule of 5½ hr. each way for the 275 miles. Each car will have its own oil burning engine and hydraulic-mechanical drive located on the trucks. One car will contain a small kitchen and dining compartment.

IRON AND STEEL

THE VIRGINIAN has placed orders for a total of 10,000 tons of rail—8,000 tons from the Bethlehem Steel Company and 2,000 from the Carnegie-Illinois Steel Corporation.

THE LOUISVILLE & NASHVILLE has ordered 31,000 tons of rails, including 24,000 tons of 100 lb. and 7,000 tons of 131 lb., from the Tennessee Coal, Iron & Railroad Company.

Supply Trade

R. L. Hibbard of the New York office of Cutler-Hammer, Inc., has been appointed to the merchandise sales staff of the Detroit (Mich.) office.

The Globe Steel Tubes Company has established a sales office at 1033 Broad Street Station Building, Philadelphia, Pa., in charge of Paul C. Lewis, sales agent.

The Coffing Hoist Company, Danville, Ill., has moved its plant and offices into its recently constructed factory and office building.

George H. Johnson has been elected president of the Gisholt Machine Company, Madison, Wis., succeeding his father, Hobart S. Johnson, who has been elected chairman of the board. H. S. Johnson, Jr., has been elected vice-president.

The Whiting Corporation of Harvey, Ill., announces that it has acquired the 29-year-old Quickwork Company, manufacturers of rotary shears, stamping trimmers and forming machines, power hammers, throatless shears and flangers, formerly of St. Marys, Ohio, and Chicago. Stevens H. Hammond, vice-president of Whiting, will be in charge of all Quickwork operations, while Paul V. Hyland, formerly of the Industrial division of Whiting, has been appointed sales manager of the Quickwork line. B. W. Packer, formerly



BRIDGE AT SOLIS

SWITZERLAND

This beautiful 138 ft. span, which was built in 1902 at Solis, Switzerland, is an outstanding example of the use of natural rock in modern bridge construction. As the structure stands at a height of 282 ft. above the floor of the valley it affords a perfect vantage point for a view of the surrounding countryside.

* * * * *

For 31 years the Security Sectional Arch has proved to be the most effective means of fuel conservation. While the basic design remains unchanged, it has been continuously developed by The American Arch Company in keeping with the progress in locomotive design, and today, it is still an essential factor in the economical operation of modern steam power.

There's More to SECURITY ARCHES Than Just Brick

**HARBISON-WALKER
REFRACTORIES CO.**

Refractory Specialists



**AMERICAN ARCH CO.
INCORPORATED**

60 EAST 42nd STREET, NEW YORK, N. Y.

***Locomotive Combustion
Specialists***

of the Quickwork Company, will join the new organization as chief engineer and **S. M. Steinko** will be in charge of advertising. It is announced that all Quickwork products will be manufactured by the Whiting organization at its plant at Harvey.

OBITUARY

William D. Thompson, sales representative of the Standard Railway Equipment Company, Chicago, died on September 6 near Birmingham, Mich., at the age of 67, after an illness of a year.

Construction

FORT HANCOCK.—WPA forces are engaged in extensive improvements to the railway system at Fort Hancock, N. J. The work includes the laying of 4,100 ft. of track, the replacement of one mile of rotted ties, the removal of 3,000 ft. of abandoned track, and considerable realignment work.

KANSAS CITY SOUTHERN.—A contract has been awarded the Kansas City Bridge Company, Kansas City, Mo., for the superstructure, including the machinery in connection with the lift span, of a new bridge over the Neches river at Beaumont, Tex., which will cost approximately \$400,000. A description of this bridge was published in the *Railway Age* of July 20, page 127, with the announcement of the contract for the substructure.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—A contract has been awarded E. W. Wylie, Inc., St. Paul, Minn., for grading work involved in a revision of grades west of Neenah, Wis. About 180,000 cu. yd. of material will be removed.

A contract has been awarded to the Edward H. Meyer Construction Company, Oshkosh, Wis., for the construction of a two-story freight house and office building, 30 ft. by 60 ft., with covered wing platforms at Neenah to cost \$21,000.

A contract has been awarded to the Dunnigan Construction Company, St. Paul, Minn., for the construction of a two-story frame freight house, 30 ft. by 80 ft.; a one-story office building, 24 ft. by 56 ft.; covered transfer platforms, 12 ft. by 310 ft. and 10 ft. by 418 ft.; and a macadam driveway all at Stevens Point, Wis., to cost \$20,700.

NEW YORK, CHICAGO, ST. LOUIS-PENNSYLVANIA.—The New York Public Service Commission has approved a bid in the amount of \$435,069 by the Bero Engineering & Construction Corp. of North Tonawanda, for the cost of elimination of crossings of these two roads with Central and Washington avenues and Brigham road in the city of Dunkirk. An estimate of cost in the amount of \$781,490 for this project was reported in the *Railway Age* of September 14, page 381.

Financial

ATLANTIC COAST LINE-LOUISVILLE & NASHVILLE.—*Bonds of the Carolina, Clinchfield & Ohio.*—The Carolina, Clinchfield & Ohio has been granted authority by Division 4 of the Interstate Commerce Commission to issue \$22,150,000 of first mortgage four per cent bonds, series A, to be delivered to the Atlantic Coast Line and the Louisville & Nashville to provide for the redemption of the C. C. & O.'s outstanding bonds and note, details of which were given in the *Railway Age* of August 31, page 323.

At the same time Division 4 authorized the Atlantic Coast Line and the Louisville & Nashville to assume liability, as lessees and guarantors, for the payment of the bonds.

BALTIMORE & OHIO.—*Pledge of Bonds.*—This company has asked the Interstate Commerce Commission for authority to nominally issue and pledge \$655,000 of its refunding and general mortgage six per cent bonds, series E, as collateral for short-term loans.

CHICAGO, BURLINGTON & QUINCY.—*Abandonment by the Colorado & Southern.*—The Colorado & Southern would be permitted to abandon a portion of its Augular branch extending from Augular, Colo., to the terminus at milepost 195.516, 2.4 miles, if Division 4 of the Interstate Commerce Commission adopts a proposed report of its Examiner A. G. Nye.

CHICAGO, ROCK ISLAND & PACIFIC.—*Equipment Trust Certificates.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to assume liability for \$2,460,000 of two per cent equipment trust certificates, maturing in 20 equal semiannual installments of \$123,000 on May 1 and November 1 of each year, beginning May 1, 1941, and ending November 1, 1950. The issue has been sold at 100.179 to Solomon Brothers & Hutzler, acting on behalf of themselves and Dick & Merle-Smith and Stroud & Co., Inc., making the average annual cost to the company approximately 1.99 per cent.

DELAWARE & HUDSON.—*Abandonment and Joint Operation.*—The Chateaugay & Lake Placid and the Delaware & Hudson, respectively, have been authorized by Division 4 of the Interstate Commerce Commission to abandon a line and the operation of a line extending from Plumadore, N. Y., to Saranac Lake, 22.1 miles. At the same time the Delaware & Hudson was authorized to operate over a line of the New York Central between these same points, 27 miles.

DENVER & RIO GRANDE WESTERN.—*Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon a line extending from Leadville, Colo., westerly to Leadville Junction, 2.9 miles.

DULUTH MISSABE & IRON RANGE.—*Equipment Trust Certificates.*—This road

has sold a \$1,500,000 issue of 1½ per cent equipment trust certificates to Alex, Brown & Sons; Harris, Hall & Co. and the Illinois Company on a bid of 101.04. The certificates mature in ten equal installments of \$150,000 from October 1, 1941, to 1950. They were reoffered by the buyers at prices to yield from 0.20 to 1.65 per cent. The certificates finance in part the acquisition of new rolling stock to cost \$2,089,200, orders and inquiries for which were reported in the *Railway Age* of August 31. The cash equity put up by the road, therefore, exceeds 25 per cent of the total cost.

EAST TENNESSEE & WESTERN NORTH CAROLINA.—*Control by the Cranberry Corporation.*—Division 4 of the Interstate Commerce Commission has approved the acquisition by the Cranberry Corporation of control of this company and the Linville River through ownership of the capital stock.

ILLINOIS CENTRAL.—*Equipment Trust Certificates and R. F. C. Financing.*—This company has asked the Interstate Commerce Commission to approve a plan whereby it would sell to the Reconstruction Finance Corporation \$11,016,000 of three per cent equipment trust certificates, maturing in 24 equal semi-annual installments of \$459,000. The proceeds of the issue would be used as part payment for equipment costing a total of \$11,094,362 and consisting of 3,000 steel box cars, and one streamlined train composed of the following units: One 2,000 h.p. streamlined Diesel-electric locomotive, one baggage dormitory car, one lounge-observation car, one dining and kitchen car, four straight coaches, two single rail motor cars, one two-car rail motor unit, and four 2,000 h.p. Diesel-electric locomotives.

LEHIGH VALLEY.—*Voluntary Adjustment Plan.*—Comptroller A. F. Bayfield of this road reported to the federal court of jurisdiction at Philadelphia, Pa., that the total expense incurred by the company for completion of its voluntary financial adjustment plan has been approximately \$275,000, of which \$166,377 has been paid. The court, on September 11, heard applications of law firms and trust companies for compensation for their services totaling \$180,705 in claims.

NEW YORK, NEW HAVEN & HARTFORD.—*Oral Argument Scheduled.*—Division 4 of the Interstate Commerce Commission has set October 16 as the date for oral argument on the question of whether or not the Old Colony shall be reorganized as a part of this company. The New Haven's reorganization case was recently reopened in order that testimony might be taken on the question of the feasibility of abandoning the so-called Boston group of the Old Colony and including that road as a part of the reorganized New Haven. The final plan of the commission has made no provision for the reorganization of the Old Colony at this time.

Abandonment.—Rear Admiral W. B. Woodson, Judge-Advocate-General of the United States Navy has asked and has been granted authority by Division 4 of the Interstate Commerce Commission to

AVOID "DESIGN DETOURS"



The return bends of superheater units, will withstand temperatures as high as 2,000 degrees F., together with a blast of cinders; and internal steam pressures ranging up to and above 300 lb.

The use of "design detours"—the welding of parts together, introduces elements of unreliable service, higher drop in pressure, with low superheater and engine efficiency.

You ordered your original superheater to a definite design to assure maximum efficiency and dependability . . . maintain this design and efficiency by having your unserviceable superheater units RE-manufactured the Elesco way . . . where new return bends are machine-die-forged from sound straight lengths of the old tubing.

The Elesco way pays . . . use it.



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AMERICAN THROTTLES • STEAM DRYERS
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THE SUPERHEATER COMPANY, LTD.

intervene and participate in oral argument on the question of the abandonment of the so-called Boston group of Old Colony lines. In his brief, the Judge-Advocate-General pointed out that the Old Colony serves the Naval Ammunition Depot at Hingham, Mass., and the Bethlehem Shipbuilding Corporation plant at Quincy, Mass. Rail transportation, he continued, is vitally essential in the interest of national defense at this time.

"If the Boston group of the Old Colony properties should be abandoned and rail service to the Fore River Shipbuilding plant discontinued," said the brief, "it would not be possible to make material deliveries to the yard by truck since the unit tonnages involved are far in excess of highway load maxima established by the Commonwealth of Massachusetts."

This argument of the Navy Department was recognized by Interstate Commerce Commission Examiner W. J. Schutrumpf in a proposed report in which he recommended the abandonment of the Boston group, details of which were given in the *Railway Age* of August 31, page 316. In that report the examiner conceded that such situations might arise, but he was not of the opinion that they should be given sufficient weight to preclude the granting of authority for the abandonments.

SEABOARD AIR LINE.—Abandonment by the Raleigh & Charleston.—The Raleigh & Charleston has asked the Interstate Commerce Commission for authority to abandon its line extending from South Marion, S. C., in a northeasterly direction to Lake View 19.9 miles.

SEABOARD AIR LINE.—Abandonment by the Charlotte, Monroe & Columbia.—The Charlotte, Monroe & Columbia would be authorized to abandon its entire line of railroad extending from Jefferson, S. C., to McBee, 17.2 miles, if Division 4 of the Interstate Commerce Commission adopts a proposed report of its Examiner Lucian Jordan.

SOUTHERN PACIFIC.—Abandonment.—This company would be authorized to abandon a portion of its San Jose-Santa Cruz branch extending from Los Gatos, Calif., to Olympia, 15.2 miles, if Division 4 of the Interstate Commerce Commission adopts a recommended order of its Examiner A. G. Nye.

SPRINGFIELD SOUTHERN.—Acquisition and Operation.—This company has asked authority from the Interstate Commerce Commission to acquire and operate a part of the line formerly owned and operated by the Chicago, Springfield & St. Louis and abandoned by it, extending from Springfield, Ill., to Lockhaven, 7.7 miles.

Dividends Declared

Cleveland, Cincinnati, Chicago & St. Louis.—5 Per Cent Preferred, \$1.25, quarterly, payable October 31 to holders of record October 21.

Average Prices of Stocks and Bonds

	Sept. 24	Last week	Last year
Average price of 20 representative railway stocks..	30.45	29.70	36.24
Average price of 20 representative railway bonds..	60.56	59.16	60.06

Railway Officers

EXECUTIVES

Manuel S. Mayagoitia, whose appointment as general manager of the National Railways of Mexico and president



Manuel S. Mayagoitia

of the Workers Board of Directors, with headquarters at Mexico City, entered railway service on May 1, 1910, as an assistant carpenter in the maintenance of way department on that road, later serving as a crane operator and a carpenter. On February 1, 1912, he became a brakeman, and three years later he was promoted to conductor. Mr. Mayagoitia was advanced to trainmaster on July 2, 1920, and on August 11, 1926, he was promoted to division superintendent, with headquarters at Torreón, Coah. On May 1, 1930, he was further advanced to assistant general superintendent of transportation, later being transferred to the Mixed Commission of Labor, representing the personnel department of the National Railways. On January 1, 1935, he was appointed representative of the National Railways on the federal Committee of Conciliation and Arbitration, the position he held until his recent appointment, which was effective August 28.

ENGINEERING AND SIGNALING

W. E. Cornell, division engineer of the Buffalo and Cleveland divisions, Nickel Plate district, of the New York, Chicago & St. Louis, with headquarters at Conneaut, Ohio, has been promoted to engineer of track, a newly created position, with headquarters at Cleveland, Ohio. **H. F. Whitmore**, division engineer of the Clover Leaf district, has been transferred to the Lake Erie and Western district, with headquarters as before at Frankfort, Ind., succeeding **C. R. Wright**, whose promotion to assistant chief engineer, with headquarters at Cleveland, was announced in the *Railway Age* of September 14, and **R. E. Oberdorf**, assistant district engineer on the Lake Erie and Western district, has been appointed division engineer of the Clover Leaf district, with headquarters at Frankfort, replacing Mr. Whit-

more. **Ernest R. Taylor**, chief draftsman in the chief engineer's office at Cleveland, has been promoted to division engineer of the Buffalo and Cleveland divisions, with headquarters at Conneaut, relieving Mr. Cornell.

FINANCIAL, LEGAL AND ACCOUNTING

Frederick C. Sharood, deputy general auditor of the Northern Pacific, with headquarters at St. Paul, Minn., has retired because of ill health. Mr. Sharood entered railroad service in 1894 as a messenger in the telegraph department of the Northern Pacific, later serving with the Great Northern, the Chicago Great Western and the Virginian, and from 1910 to 1919 he was connected with the Interstate Commerce Commission as an accountant. Early in 1920 he returned to the Northern Pacific as valuation accountant, and later in the same year he was promoted to assistant general auditor. Mr. Sharood was advanced to deputy general auditor, with headquarters as before at St. Paul, in February, 1938.

J. C. McKalip, general auditor of the Bessemer & Lake Erie at Pittsburgh, Pa., whose retirement was reported in the *Railway Age* of September 21, entered the employ of the Allegheny Valley on May



J. C. McKalip

1, 1887, and subsequently went with the Pennsylvania. He entered the service of the Bessemer & Lake Erie in April, 1901, and for the past 30 years served as its chief accounting officer and director. During the period of federal control Mr. McKalip served as federal auditor.

OPERATING

P. L. Gaddis, district superintendent of the Florida East Coast, with headquarters at Miami, Fla., has been appointed superintendent at New Smyrna Beach, Fla.

J. C. Wallace, whose promotion to assistant general superintendent of the New York, Chicago & St. Louis (Nickel Plate), with headquarters at Cleveland, Ohio, was announced in the *Railway Age* of September 14, was born at Harrisburg, Pa., on November 1, 1886, and graduated in civil engineering from Pennsylvania State Col-

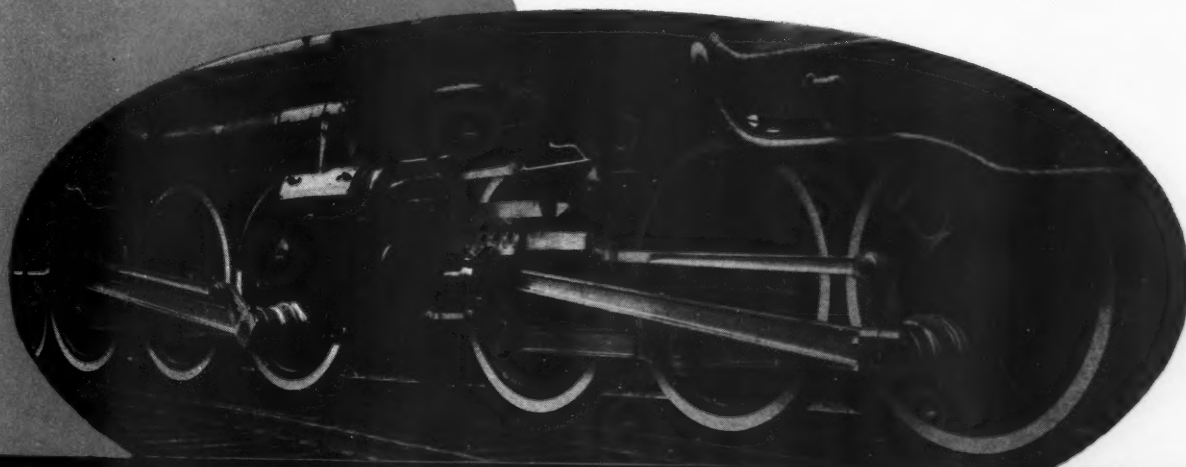
ALCO FORGINGS

*Meet the Most Rigid
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HIGH SPEED SERVICE

ALCO quality forgings have played a major role in the attainment of this new peak of locomotive perfection. Alco light weight reciprocating parts not only protect the locomotive investment—but minimize rail pounds at the higher speeds and produce important economies in track and locomotive maintenance... Their unsurpassed strength and un-failing performance insures the continued serviceability and high availability of the locomotives in this heavy high speed service.

The manufacture of high grade steel forgings is and always has been one of Alco's outstanding specialties. And now with plant facilities modernized to produce the finest light weight alloy steel forgings, Alco is in a position to serve you better than ever before.



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lege in 1911. He entered railway service in April, 1914, as a structural draftsman on the Chicago, Milwaukee, St. Paul & Pacific and four years later he went with the Lake Erie & Western (now part of the Nickel Plate), as engineer of structures, later becoming district engineer at Indianapolis, Ind. In May, 1925, Mr. Wallace was promoted to assistant chief engineer of the Nickel Plate, with headquarters at Cleveland, the position he held until his recent promotion, which was effective September 1.

TRAFFIC

J. F. Jones has been appointed general agent of the New York Central at Baltimore, Md., succeeding **E. M. Hess**, who has been transferred to Washington, D. C.

Arthur Mackenzie, freight traffic manager of the Chicago, Rock Island & Pacific, will retire on December 1, and will be succeeded by **James W. Hill**, general traffic manager of the Denver & Rio Grande Western.

Fenton Henry Dowling, whose promotion to general freight agent on the Missouri-Kansas-Texas, with headquarters at Kansas City, Mo., was announced in the *Railway Age* of September 14, was born in St. Louis, Mo., on May 22, 1898, and attended business college. He entered railway service on December 16, 1912, on the St. Louis Southwestern at St. Louis, and in 1920 he went with the Wabash, returning to the Cotton Belt the following year. On April 16, 1924, Mr. Dowling went with the M-K-T as soliciting freight agent at St. Louis, and five years later he was promoted to district



Fenton Henry Dowling

freight agent at Minneapolis, Minn. He was later promoted to district freight and passenger agent and then to general agent at that point, holding the latter title until his recent promotion, which was effective August 16.

James Bacon Sharpton, whose appointment as assistant to general traffic manager of the Atlantic Coast Line at Wilmington, N. C., was reported in the *Railway Age* of September 14, was born on March 31, 1902, at Edgefield, S. C. He entered railroad service on December 17, 1923, with the Atlantic Coast Line as stenographer in the freight traffic depart-

ment at Wilmington. On July 1, 1928, he was appointed assistant chief clerk in the same department, becoming chief clerk on August 10, 1934. Mr. Sharpton was appointed special traffic representative at Wilmington on August 1, 1935, and became assistant to freight traffic manager on August 16, 1939, the position he held until his recent appointment as assistant to general traffic manager.

A. F. Labundy, traveling passenger agent for the Pere Marquette at Chicago, has been promoted to general western passenger agent with the same headquarters, succeeding **R. W. Ohlman** who will retire on October 1.

Edison Lee Watkins, whose appointment as general freight agent of the Atlantic Coast Line at Wilmington, N. C.,



Edison Lee Watkins

was reported in the *Railway Age* of September 14, was born at Chase City, Va., on April 30, 1889. He entered railroad service in 1906 as billing clerk in the freight office of the Atlantic Coast Line at Richmond, Va., remaining there until 1907. From 1908 to 1911, Mr. Watkins served as rate clerk in the freight office of the Southern at Richmond and from January to February, 1912, he was rate clerk in the freight office of the Louisville & Nashville at Birmingham, Ala. He served as rate clerk in the freight office of the Atlantic Coast Line from March to August, 1912; as rate clerk in the accounting department at Wilmington from August, 1912, to November, 1916; and as chief quotation clerk in the freight traffic department at Wilmington from November, 1916, to June, 1917. In July, 1917, Mr. Watkins was appointed rate clerk at Wilmington; in January, 1920, chief rate clerk; and in January, 1921, chief clerk in the freight traffic department, all with the Atlantic Coast Line. In May, 1926, he was appointed assistant general freight agent at Wilmington, the position he held until his recent appointment as general freight agent.

Sam Patterson Wigg, whose appointment as assistant to general freight traffic manager of the Atlantic Coast Line at Wilmington, N. C., was reported in the *Railway Age* of September 14, was born on May 17, 1899, at Portsmouth, Va. Mr. Wigg entered railroad service on January 2, 1916, with the Seaboard Air Line and

served as messenger and in various clerical capacities in the general offices in Portsmouth. In 1918 he enlisted in the



Sam Patterson Wigg

United States Army, but returned to his former duties in 1919. In 1922 Mr. Wigg became rate clerk with the Southern Freight Association in Atlanta, Ga., and in 1925 he re-entered the service of the Seaboard Air Line in the freight traffic department at Norfolk, Va. In 1928 he went with the Fourth Section Committee of Southern Carriers at Atlanta, serving as chief clerk to that organization and subsequently in the same position with the Fourth Section Advisory Committee at Southern Freight Association headquarters. Mr. Wigg entered the service of the Atlantic Coast Line at Wilmington in 1936.

OBITUARY

John Martin Gill, assistant chief claims agent of the Canadian National, with headquarters at Montreal, died on September 20 at his home in that city, at the age of 52 years, after an illness of six months.

Rowland John Foreman, general freight traffic manager of the Canadian National, with headquarters at Montreal, Que., whose death on September 17 was reported in the *Railway Age* of September

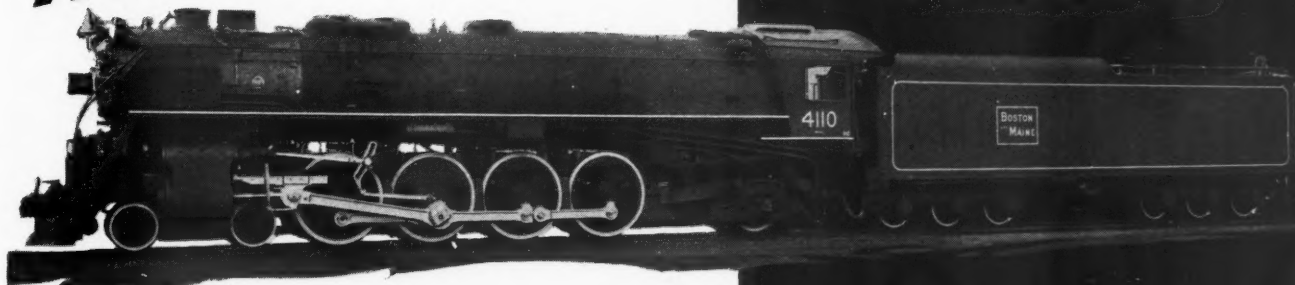


Rowland John Foreman

21, was born on December 31, 1878, at Toronto, Ont. Mr. Foreman received his early education in the public schools of that city and entered the service of the Grand Trunk at Toronto in August, 1892,

*On the Best
of
Modern Power*

H S G I
Wear Resisting
PARTS



AMONG the outstanding locomotives delivered this year are the locomotives built by the Baldwin Locomotive Works for the Boston and Maine.

Like all modern power which is establishing new records for high mileage, economical fuel consumption and low maintenance, the new locomotives are equipped with wear-resisting parts made from HUNT-SPILLER *Air Furnace* GUN IRON.

The intensive use of modern power demands the use of dependable materials. HUNT-SPILLER *Air Furnace* GUN IRON measures up to all the new requirements and assures maximum service at a minimum expenditure. The results show big savings in the cost of operation.



H S G I
Reg. U.S. Trade Mark

Cylinder Bushings
Cylinder Packing Rings
Pistons or Piston Bull Rings
Valve Bushings
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Valve Bull Rings
Crosshead Shoes
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Finished Parts

Dunbar Sectional Type Packing
Duplex Sectional Type Packing
for Cylinders and Valves
(Duplex Springs for Above
Sectional Packing)
Cylinder Snap Rings
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Light Weight Valves
Cylinder Liners and Pistons
for Diesel Service

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GUN IRON

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as a clerk in the superintendent's office and later served in various branches of the freight traffic department at Walkerville and St. Thomas, Ont., and Detroit, Mich. In September, 1904, Mr. Foreman was appointed chief clerk to the chairman of the Canadian Freight Association at Toronto and at Montreal. In January, 1906, he was appointed chief clerk to the assistant freight traffic manager, later becoming chief of the tariff bureau of the Grand Trunk Pacific at Winnipeg, Man. In January, 1911, Mr. Foreman was appointed assistant general freight agent of the Grand Trunk Pacific at Winnipeg and in 1913 he was transferred to Montreal as assistant to the vice-president of the Grand Trunk and the Grand Trunk Pacific. In August, 1920, he became foreign freight agent of the Canadian National at Montreal and six years later was promoted to general foreign freight agent. In 1936 he

became traffic manager, foreign freight department and in March, 1939, became general freight traffic manager of the Canadian National and Grand Trunk.

Arthur Comstock Watson, chief engineer of the New York Zone of the Pennsylvania and the Long Island, with headquarters at New York, died on September 23 at the Roosevelt hospital, New York, at the age of 59 years.

J. C. Lewis, president of the Railway Fuel and Traveling Engineers' Association in 1937-38 and road foreman of engines of the Richmond, Fredericksburg & Potomac, died suddenly on September 18 while attending a staff meeting.

PURCHASES AND STORES

William S. Riach, chief clerk in the general store department of the Atchison,

Topeka & Santa Fe at Topeka, Kan., has been promoted, effective October 1, to assistant general purchasing agent, with headquarters at Chicago, eventually succeeding **Edward G. Walker** who will retire on October 31.

Following the merger of the Gulf, Mobile & Northern and the Mobile & Ohio into the Gulf, Mobile & Ohio, **H. E. Warren**, manager of purchases and stores, of the G. M. & N., **W. J. Diehl**, purchasing agent, of the M. & O., and **G. H. Therrill**, general storekeeper of the G. M. & N. have been appointed to the same positions on the G. M. & O., all with headquarters at Mobile, Ala. **G. M. Wahl**, secretary and assistant treasurer of the G. M. & N., has been appointed assistant purchasing agent of the G. M. & O. with headquarters at Mobile.

Operating Revenues and Operating Expenses of Class I Steam Railways

Compiled from 133 Monthly Reports of Revenues and Expenses Representing 137 Class I Steam Railways

(Switching and Terminal Companies Not Included)

FOR THE MONTH OF JULY, 1940 AND 1939

Item	United States		Eastern District		Southern District		Western District	
	1940	1939	1940	1939	1940	1939	1940	1939
Miles of road operated at close of month	232,750	233,383	57,349	57,543	44,342	44,469	131,059	131,371
Revenues:								
Freight	\$300,657,911	\$265,086,125	\$125,096,091	\$102,885,975	\$57,134,510	\$52,560,889	\$118,427,310	\$109,639,261
Passenger	37,731,789	41,269,284	20,212,391	22,407,073	4,236,936	4,183,298	13,282,462	14,678,913
Mail	7,745,753	7,717,863	2,941,201	2,917,583	1,314,689	1,325,127	3,489,863	3,475,153
Express	2,757,050	2,640,026	1,135,277	1,056,481	342,772	350,596	1,279,001	1,232,949
All other operating revenues	17,185,060	15,722,554	8,183,451	7,479,947	1,925,667	1,697,832	7,075,942	6,544,775
Railway operating revenues	366,077,563	332,435,852	157,568,411	136,747,059	64,954,574	60,117,742	143,554,578	135,571,051
Expenses:								
Maintenance of way and structures	46,935,400	43,186,402	18,054,274	15,516,049	7,930,762	6,960,760	20,950,364	20,709,593
Maintenance of equipment	69,310,649	61,039,743	31,386,449	26,190,066	13,423,854	11,905,037	24,500,346	22,944,640
Traffic	9,149,844	8,940,800	3,405,104	3,270,515	1,687,561	1,593,568	4,057,179	4,076,717
Transportation—Rail line	122,229,685	114,878,297	55,559,845	50,847,553	20,138,381	18,831,619	46,531,459	45,199,125
Transportation—Water line	573,527	391,658					573,527	391,658
Miscellaneous operations	3,368,658	3,492,678	1,444,758	1,415,897	340,198	307,203	1,583,702	1,769,578
General	10,901,798	10,493,507	4,427,909	4,170,508	2,076,949	1,997,677	4,396,940	4,325,322
Transportation for investment—Cr.	470,566	460,993	83,459	93,554	45,943	51,962	341,164	315,477
Railway operating expenses	261,998,995	241,962,092	114,194,880	101,317,034	45,551,762	41,543,902	102,252,353	99,101,156
Net revenue from railway operations	104,078,568	90,473,760	43,373,531	35,430,025	19,402,812	18,573,840	41,302,225	36,469,895
Railway tax accruals	35,650,143	30,028,485	15,366,199	12,880,634	7,857,600	6,051,941	12,426,344	11,095,910
Railway operating income	68,428,425	60,445,275	28,007,332	22,549,391	11,545,212	12,521,899	28,875,881	25,373,985
Equipment rents—Dr. balance	8,335,806	8,410,228	4,141,090	3,839,824	7,582	34,661*	4,187,134	4,605,065
Joint facility rent—Dr. balance	2,988,454	3,038,436	1,725,846	1,644,922	328,630	336,879	933,978	1,056,635
Net railway operating income	57,104,165	48,996,611	22,140,396	17,064,645	11,209,000	12,219,681	23,754,769	19,712,285
Ratio of expenses to revenues (per cent)	71.6	72.8	72.5	74.1	70.1	69.1	71.2	73.1
Depreciation included in operating expenses	17,190,957	16,792,734	7,468,681	7,378,319	3,455,546	3,322,429	6,266,730	6,091,986
Pay roll taxes	9,899,465	8,700,774	4,321,941	3,707,931	1,708,775	1,468,006	3,868,749	3,524,837
All other taxes	25,750,678	21,327,711	11,044,258	9,172,703	6,148,825	4,583,935	8,557,595	7,571,073

FOR SEVEN MONTHS ENDED WITH JULY, 1940 AND 1939

Item	United States		Eastern District		Southern District		Western District	
	1940	1939	1940	1939	1940	1939	1940	1939
Miles of road operated at close of month	232,910	233,574	57,384	57,595	44,350	44,485	131,176	131,494
Revenues:								
Freight	\$1,938,655,635	\$1,718,178,323	\$828,794,956	\$706,855,068	\$399,682,935	\$346,317,001	\$710,177,744	\$665,006,254
Passenger	234,651,107	239,477,676	126,899,009	132,214,456	35,725,017	32,678,724	72,027,081	74,584,496
Mail	56,628,543	55,693,744	21,615,718	21,336,692	9,752,571	9,677,364	25,260,254	24,679,688
Express	29,750,354	30,499,833	12,179,392	11,861,842	6,194,919	7,125,416	11,376,043	11,512,575
All other operating revenues	101,988,559	92,712,832	50,314,475	45,330,970	13,072,138	11,757,603	38,601,946	35,624,259
Railway operating revenues	2,361,674,198	2,136,562,408	1,039,803,550	917,599,028	464,427,580	407,556,108	857,443,068	811,407,272
Expenses:								
Maintenance of way and structures	279,578,684	262,499,880	107,370,361	97,815,477	52,691,197	47,173,833	119,517,126	117,510,570
Maintenance of equipment	466,437,431	427,266,094	208,255,130	183,419,280	92,866,031	82,212,328	165,316,270	161,634,486
Traffic	63,301,196	61,854,227	22,864,342	22,292,987	12,167,478	11,650,143	28,269,376	27,911,097
Transportation—Rail line	849,807,985	794,152,273	390,632,090	356,726,176	146,922,167	134,745,944	312,253,728	302,680,153
Transportation—Water line	3,822,286	2,797,568					3,822,286	2,797,568
Miscellaneous operations	22,322,875	21,502,439	9,777,977	9,191,944	3,352,946	2,856,423	9,191,952	9,454,072
General	76,575,803	74,798,669	30,728,622	29,772,731	14,732,915	14,190,838	31,114,266	30,835,100
Transportation for investment—Cr.	2,311,183	2,164,896	388,774	245,534	431,241	383,075	1,491,168	1,536,287
Railway operating expenses	1,759,535,077	1,642,706,254	769,239,748	698,973,061	322,301,493	292,446,434	667,993,836	651,286,759
Net revenue from railway operations	602,139,121	493,856,154	270,563,802	218,625,967	142,126,087	115,109,674	189,449,232	160,120,513
Railway tax accruals	226,469,224	202,137,766	97,424,395	86,555,139	50,368,900	40,823,873	78,675,929	74,758,754
Railway operating income	375,669,897	291,718,388	173,139,407	132,070,828	91,757,187	74,285,801	110,773,303	85,361,759
Equipment rents—Dr. balance	56,578,957	56,401,837	27,314,035	24,412,177	2,859,181	4,503,537	26,405,741	27,486,123
Joint facility rent—Dr. balance	19,554,718	20,696,720	11,003,319	11,194,523	1,920,447	2,342,271	6,630,952	7,159,926
Net railway operating income	299,536,222	214,619,831	134,822,053	96,464,128	86,977,359	67,439,993	77,736,610	50,715,710
Ratio of expenses to revenues (per cent)	74.5	76.9	74.0	76.2	69.4	71.8	77.9	80.3
Depreciation included in operating expenses	119,246,462	117,743,416	51,757,970	51,491,732	24,098,595	23,280,842	43,389,897	42,970,842
Pay roll taxes	66,246,047	59,427,134	29,084,707	25,370,304	11,973,702	10,508,103	25,187,638	23,548,727
All other taxes	160,223,177	142,710,632	68,339,688	61,184,835	38,395,198	30,315,770	53,488,291	51,210,027

* Decrease, deficit or other reverse items.

Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to revision.



Modern Mills and Skilled Men CARRY ON THE

INLAND TRADITION FOR QUALITY

FROM the day Inland made its first steel, emphasis has always been placed on use of the most modern equipment available, the most advanced processes, and men of special training and great skill—the combination which assures highest uniform quality of steel mill products.

Because of this tradition most of Inland's steel-making and finishing equipment has been replaced within the past few years. Typical of recent improvements are: modern blast furnaces; new open hearth furnaces; a blooming mill of exceptional speed and flexibility; new 44-in. and 76-in. continuous sheet and strip mills; latest types of cold reduction mills, a completely rebuilt galvanizing department; new tin mills for production of tin plate by the modern

cold reduction method; and, new furnace and mill control devices that automatically guard quality and uniformity. The Inland steel mill is as modern as any in the world.

Operating the Inland mills are steel makers and metallurgists who know and produce uniform, high quality steel. They are men who have added much to the science of steel processing, and they can be counted on for important advancements to meet the needs of the future.

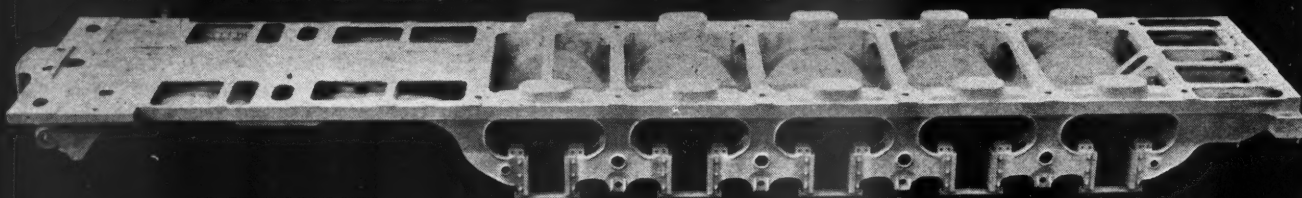
Many users of steel profit by the Inland tradition for high uniform quality. It saves them time and money. Let Inland's modern mills and skilled men go to work for you.

SHEETS • STRIP • TIN PLATE • BARS • PLATES • FLOOR PLATES • STRUCTURALS • PILING • RAILS • TRACK ACCESSORIES • REINFORCING BARS

INLAND STEEL CO.

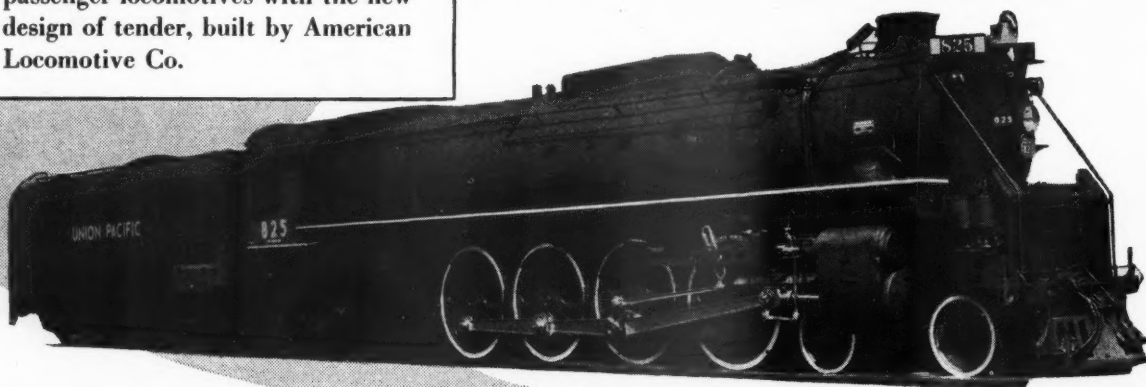
38 S. Dearborn Street, Chicago • Sales Offices: Milwaukee, Detroit, St. Paul, St. Louis, Kansas City, Cincinnati

... **Union Pacific First to Use**
An Outstanding New



Above — Commonwealth one-piece cast steel water bottom type Tender Bed for Union Pacific 4-8-4 locomotives.

Below—One of 15 new Union Pacific passenger locomotives with the new design of tender, built by American Locomotive Co.



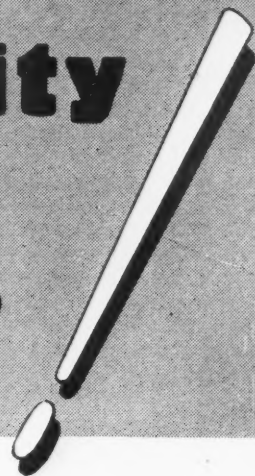
Union Pacific tender, utilizing Commonwealth cast steel Tender Bed and Commonwealth 4-wheel Guiding Truck at front, with 42" diameter wheels. At rear, five pairs of 42" wheels are guided in pedestals cast integral with the bed. Capacity of Tender: 23,500 gallons of water; 25 tons of coal.

GENERAL STEEL

COMMONWEALTH Tender Beds

Tender Development that Assures

**Greater Capacity
with Lighter
Wheel Loads**



TENDERS of new design, incorporating Commonwealth water bottom type Tender Beds, have been in service over one year on 15 Union Pacific passenger locomotives.

This important new development, which is a departure from conventional tender

design, makes possible increased water and fuel capacity within a fixed total wheelbase; larger diameter wheels; lighter loads per pair of wheels; more uniform weight distribution and a reduction in tender weight.

Following are some of the many advantages of this improved tender design:

- Increased capacity within established limits
- Reduction in load per wheel
- Larger wheel diameter allows increased mileage per wheel turning
- Lower center of gravity
- Better weight distribution at rail and reduced track stresses
- Reduction of moving and wearing parts, and greater ease of inspection and replacement
- Better riding conditions at all speeds

Leading railroad systems in this country and abroad are daily proving the increased efficiency and economy of Commonwealth products. Further information will gladly be sent upon request.

CASTINGS

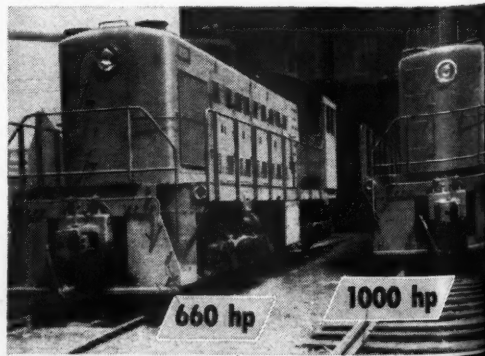
EDDYSTONE, PA.
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G-E's *Amazing NEW*



SIX IMPORTANT FEATURES FOR LONG LIFE, MINIMUM MAINTENANCE

1. Sturdy, all-welded cab, underframe, and trucks. Pound for pound, G-E's modern welding technique gives stronger, longer-lasting parts than any other kind of construction. That has been established, beyond doubt, by the record of more than 160 welded truck frames built by General Electric during the last ten years.
2. Reliable railroad design, with all parts easily accessible for inspection and maintenance.
3. Four heavy-duty traction motors, self-ventilated to eliminate weight and complication of blowing equipment and ducts. Motors are axle-mounted and cushioned from shock by spring-nose support.
4. Simple control connecting two motors permanently in parallel to each generator.
5. Full battery charging at all speeds—total 3.5 kw.
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44-ton GIANT

READY TO DO A REMARKABLY LOW-COST JOB—in light road freight and yard switching

OPERATING cost of a G-E 44-ton diesel-electric is less than half that of a comparable steam locomotive. Replacing a steam locomotive it will usually pay a net return on investment of from 20 to 30 per cent—not counting money saved by eliminating expensive coal docks, water tanks, and ash-handling and heavy repair facilities.

Careful estimates show that one of the first of these locomotives, purchased recently, will pay for itself out of savings in less than three years. (Complete details on request.)

These attractive savings are made possible by the combination of unusually low operating cost and high availability. Whereas steam locomotives rarely attain 60 per cent availability, husky diesel-electrics like these have an availability as high as 98 per cent and average from 85 to 90 per cent throughout their lifetime.

Exactly how much *you* can save depends, of course, on the cost of labor, fuel, etc., and on the number of hours a year you can keep the locomotives busy. Would you like to have a G-E transportation engineer analyze your situation? He will give you his recommendations as well as an accurate estimate of costs and net savings. No obligation. General Electric Co., Schenectady, N. Y.



44 TONS PACKED WITH POWER

Here's a diesel-electric that meets every I.C.C. requirement for locomotives in road and switching service. With two 190-hp, 1000 rpm diesel engines, its rated tractive effort is as follows:

Max. 30% adhesion—26,400 lb

One hour—15,000 lb, 5.9 mph

Continuous—13,000 lb, 7.1 mph

Maximum speed—35 mph

These locomotives can be equipped for multiple operation of one or more locomotives from one control position.

GENERAL  ELECTRIC

One
RELIABLE
SUPPLIER
for
Two
OUTSTANDING
PROCESSES



For Every Gas and Electric Welding Need

Whether you use gas or electric welding and gas cutting, speed is today's important consideration — speed in getting what you want . . . when you want it. All the more reason why you should use Airco products. For in using the oxyacetylene process, many time and money-saving advantages are obtainable with Airco oxygen, acetylene, cutting machines, ap-

paratus and supplies. In electric welding, the railroads' needs are capably filled by the rugged, economical Wilson "Hornet" Arc Welder and by the complete line of Airco electrodes. » » » Airco's manufacturing units together with its nationwide distribution facilities are ready to serve you.

*Trade-Mark Reg. U. S. Pat. Off.

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MAYARI STAYBOLT STEEL

Soaring boiler pressures tax staybolts to the utmost, require their use in increased numbers. Yet temperatures and pressures can go up without a comparable rise in maintenance costs.

Many major railroads have found the solution in the use of Mayari Staybolt Steel. This specially-developed material combines the reliability of wrought iron with the higher strength of alloy steel. Ductility is excellent. Fatigue strength is unusually high. Mayari Staybolt

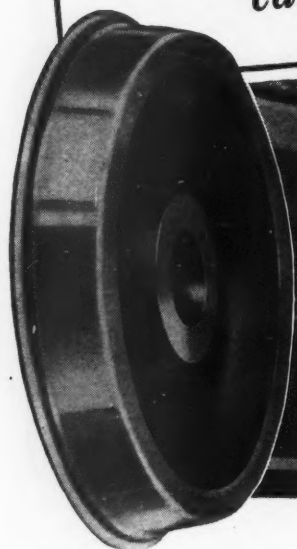
Steel has every quality essential to good, economical performance under the grueling demands of modern locomotive service.

Any staybolt manufacturer can supply bolts of this service-proved material. Simply specify Mayari Staybolt Steel. If you make your own staybolts, the same alloy steel can be shipped direct, either as solid or hollow bars, ready for machining and threading.

BETHLEHEM STEEL COMPANY



*Over a million
one-wear steel
wheels are now
in service...
on 88 railroads
and 66 private
car lines*



NEW STD
I-W-WRT. ST. WLS

A Trend... turns into a **LANDSLIDE!**

IT was only a few years ago that railroad statisticians began cautiously acknowledging "a trend toward one-wear wrought steel wheels for freight service." Today's figures tell us that 1,016,484 of these lightweight, long-mileage wheels are now carrying freight on no less than 88 railroad systems and 66 private car lines.

A long way to come in so short a time? Yes, it is, but it's still only the beginning. For the advantages of the steel wheel are so numerous, so important, so valuable to all railroad operators that they can't be overlooked. If your line has not yet begun using the

one-wear wrought steel wheel, here are some facts that you will find interesting.

- 1. LONG MILEAGE.** Test mileages up to 300,000 miles have been recorded for these wheels. However, for conservative calculations, you can anticipate 180,000 miles average under 50/55-ton service, and 150,000 miles average under 70-ton service.
- 2. LOW COST.** On a straightforward basis of cost per thousand miles, these wheels average 8 cents, approximately half the cost of freight-car wheels of other construction.
- 3. LIGHT WEIGHT.** These wheels save 1400 pounds per car, adding valuable extra lading capacity and reducing unsprung

weight by 12 per cent. This means savings in maintenance-of-way expense.

- 4. GREATER SAFETY.** Everywhere these wheels have been adopted, derailments and delays due to wheels have declined sharply. They give greater efficiency under heavy braking than wheels of other composition.

Is it any wonder that the switch-over to steel wheels is gaining momentum? But this is only part of the story. Ask one of our Wheel Engineers to call today and give you complete data on the economy and safety you can expect from U·S·S One-Wear Wrought Steel Wheels.

CARNEGIE-ILLINOIS STEEL CORPORATION

Pittsburgh

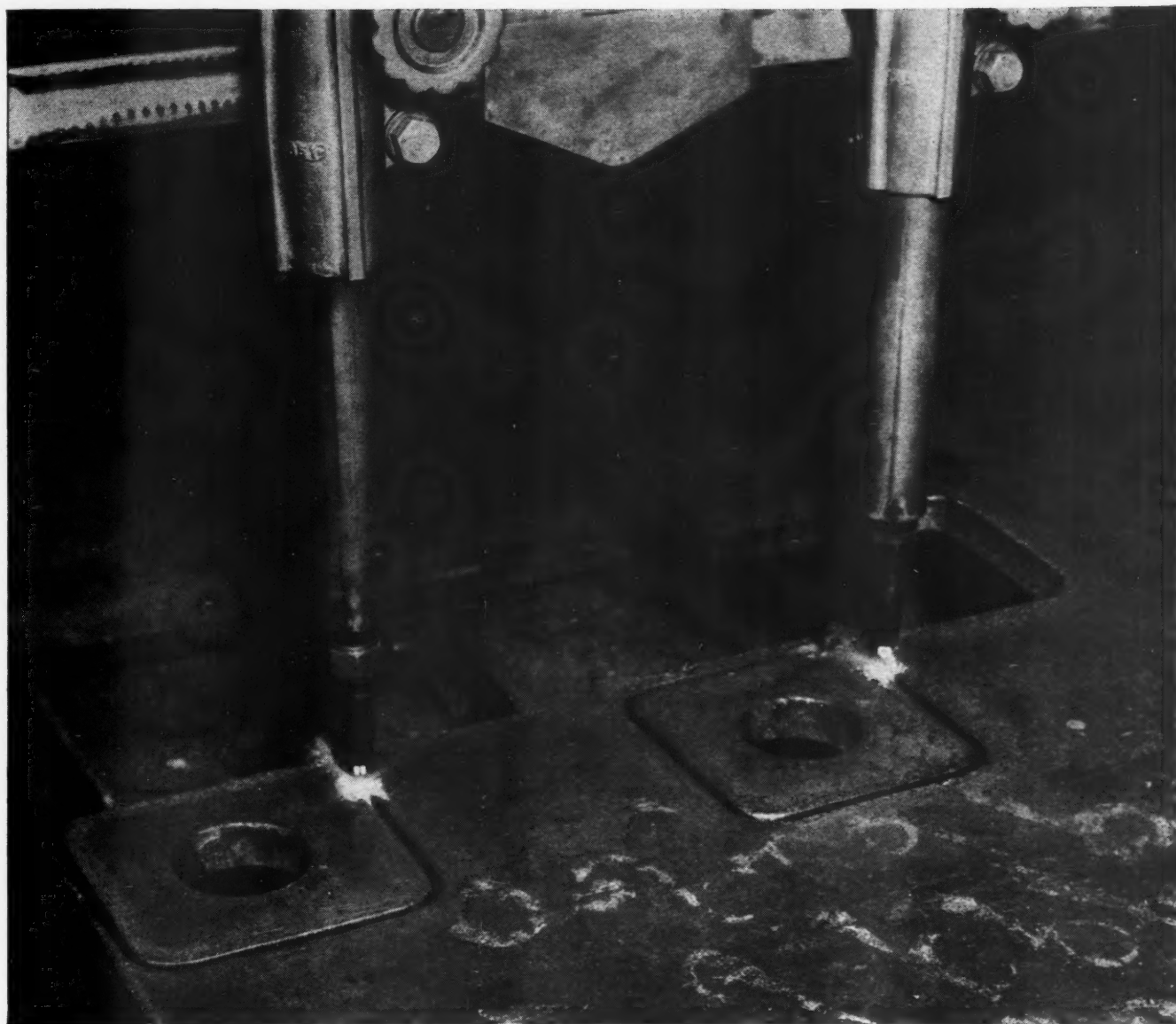


Chicago

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UNITED STATES STEEL



Reduce Costs of Metal Fabrication by **OXY-ACETYLENE MULTIPLE CUTTING**

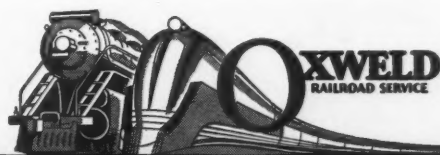
• The economies of oxy-acetylene shape-cutting can be realized to the fullest extent, in many cases, by mounting two or more blowpipes on the same cutting machine and operating them from a common templet. This method makes it possible to produce quantities of identical parts rapidly. Cut edges are clean and smooth and require a minimum of machining. The illustration above shows the simultaneous cutting of

two locomotive parts from 1-in. steel by this method. Oxweld instructors assist the railroads in achieving economical and uniform results from this type of work.

THE OXWELD RAILROAD SERVICE COMPANY
Unit of Union Carbide and Carbon Corporation



Carbide and Carbon Building Chicago and New York

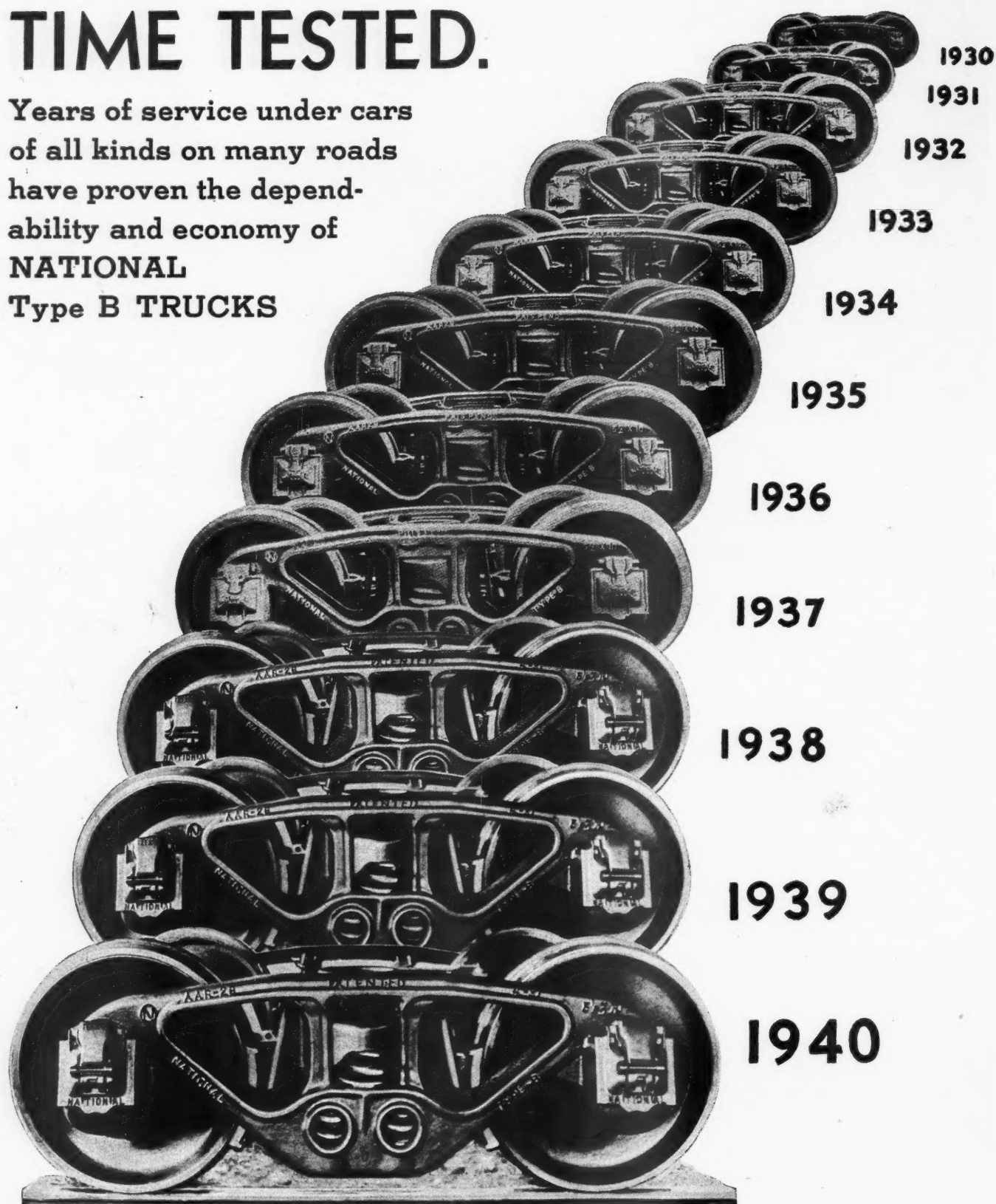


SINCE 1912—THE COMPLETE OXY-ACETYLENE SERVICE FOR AMERICAN RAILROADS

The word "Oxweld" is a registered trade-mark of a Unit of Union Carbide and Carbon Corporation.

TIME TESTED.

Years of service under cars
of all kinds on many roads
have proven the depend-
ability and economy of
NATIONAL
Type B TRUCKS



National Type B Trucks comply with all A.A.R. requirements

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DEPENDABLE STRENGTH

**... LONG LIFE and
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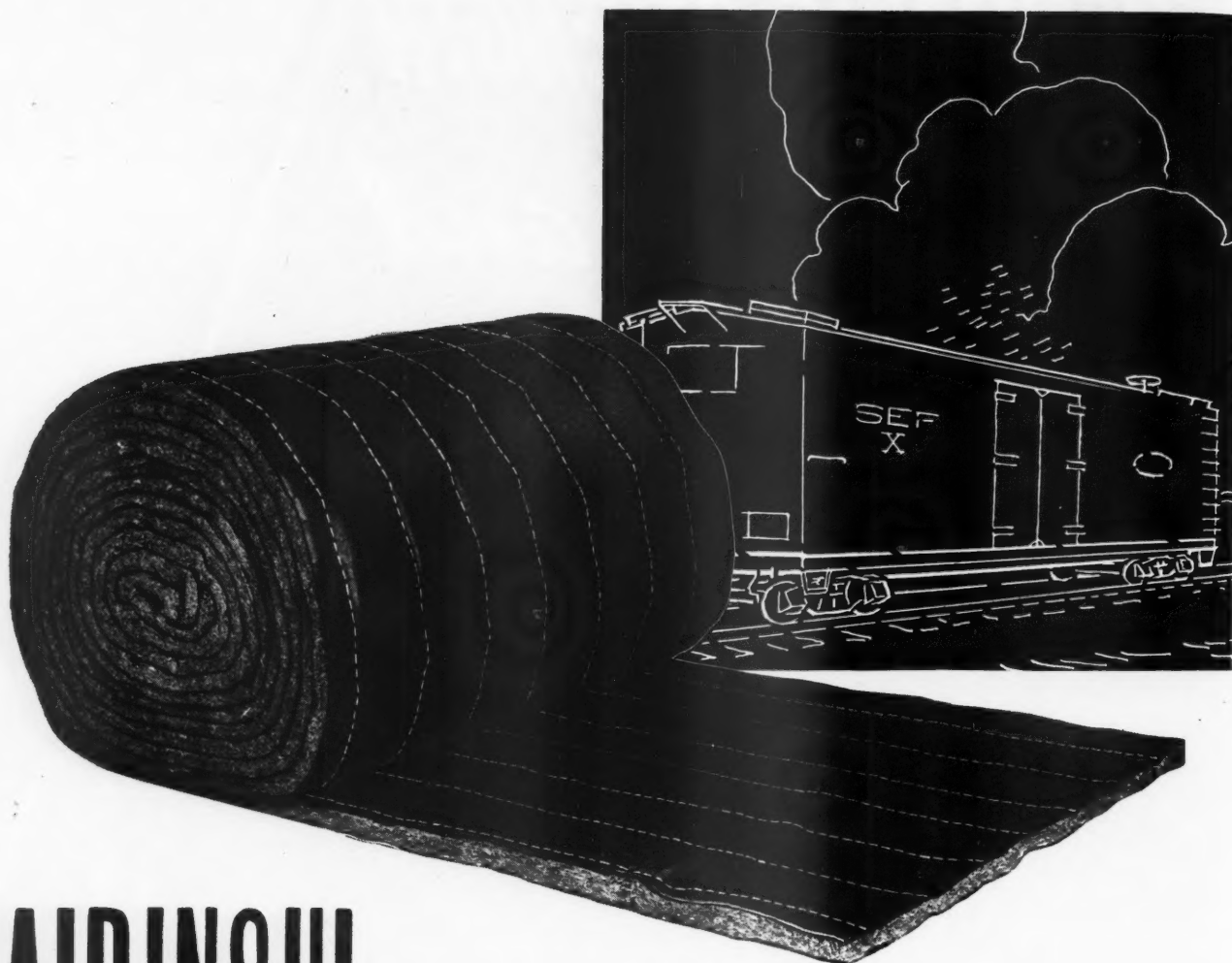
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The Unit type Snubber illustrated above embodies the fundamental Simplex Snubber principles of design, so arranged that it is interchangeable with any standard A.A.R. Class D double spring unit.

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For more than half a century, forgings and castings for railroad service have been a specialty with Standard.

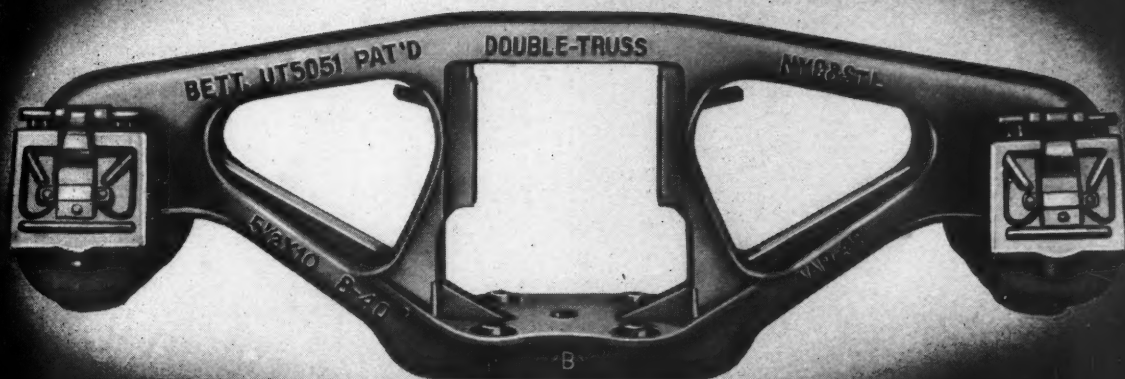
Today, as in the past, such forgings and castings are engineered by Standard's staff of specialists to give safe, economical railroad operation.

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Division of THE BALDWIN LOCOMOTIVE WORKS
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the Originators of

THE ONE PIECE CAST STEEL SIDE FRAME

Over thirty years "young" . . . and still the standard of the industry . . . the one piece cast steel side frame remains an acknowledged tribute to the progressiveness of The Bettendorf Company. Millions of hauls . . . billions of tons have moved faster and at less cost because of this once-radical advancement in side frame design. Many other improvements in car construction by an organization keyed to serve railroads everywhere, establish Bettendorf as your one logical source of supply for specialized freight cars and cast steel parts. Simplified Construction assures Low Cost Maintenance.



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CAR CONSTRUCTION

**SPRING ACTUATED
COMPRESSIONIZER**
Positively locked in
open or closed pos-
ition by a quarter
turn.

**SASH EASILY AND
QUICKLY OPENED
AND RESEALED FOR
MAINTENANCE**



Two glass panes, $\frac{1}{2}$ inch apart, glazed in separate metal frames. Separated by two abutting, compressible, removable, molded, rubber glazing strips. The inner sash is hinged and compressed to the outer by quarter-turn, spring-actuated "Compressionizers" spaced around the sash, which maintain and equalize the pressure seal, creating the Edwards Inner-Compression-Seal . . . Easily removable rubber glazing strips are on the inside, protected from exposure and deterioration. Sash easily and quickly opened for maintenance. No metal to metal contact between outside and inside frame; eliminates "sweating" of the inside frame. Dehydrating tubes located within the sealed dead-air space without breaking or impairing permanent inner seal.

**2 COMPRESSIBLE, REMOVABLE
GLAZING AND SEALING
GASKET STRIPS—**
of molded rubber vulcan-
ized into continuous bands.

OUTSIDE GLASS PANE
2 GLASS PANES
 $\frac{1}{2}$ " APART

INSIDE GLASS PANE

DEAD AIR SPACE
Moisture-free space that
insulates against heat
and cold transfer.

DEHYDRATING TUBE
Absorbs moisture trapped
between panes when win-
dow is first sealed and
when resealed.

**INNER-
COMPRESSION-SEAL**
Two abutting, molded,
rubber glazing strips com-
pressed to form perfect
seal—eliminating air infil-
tration from inside or out-
side of coach.

**2 SEPARATE
METAL FRAMES**

OUTSIDE FRAME

INSIDE FRAME

No inside-to-outside metal
contact to cause conden-
sation or "sweating" on
inside frame.

**Write or wire for data, specifications or
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DOUBLE-GLAZED SASH

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By drop-forging high-quality steel into scientifically-designed parts, high strength is obtained uniformly throughout the finished part—thus insuring greater safety.

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● *invites you to inspect this
new De Luxe passenger coach*

THE LAST WORD in modern car building
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result of 35 years experience in manufacturing
passenger equipment ... weight only 111,200 lb.,
but exceeding all A.A.R. strength requirements.

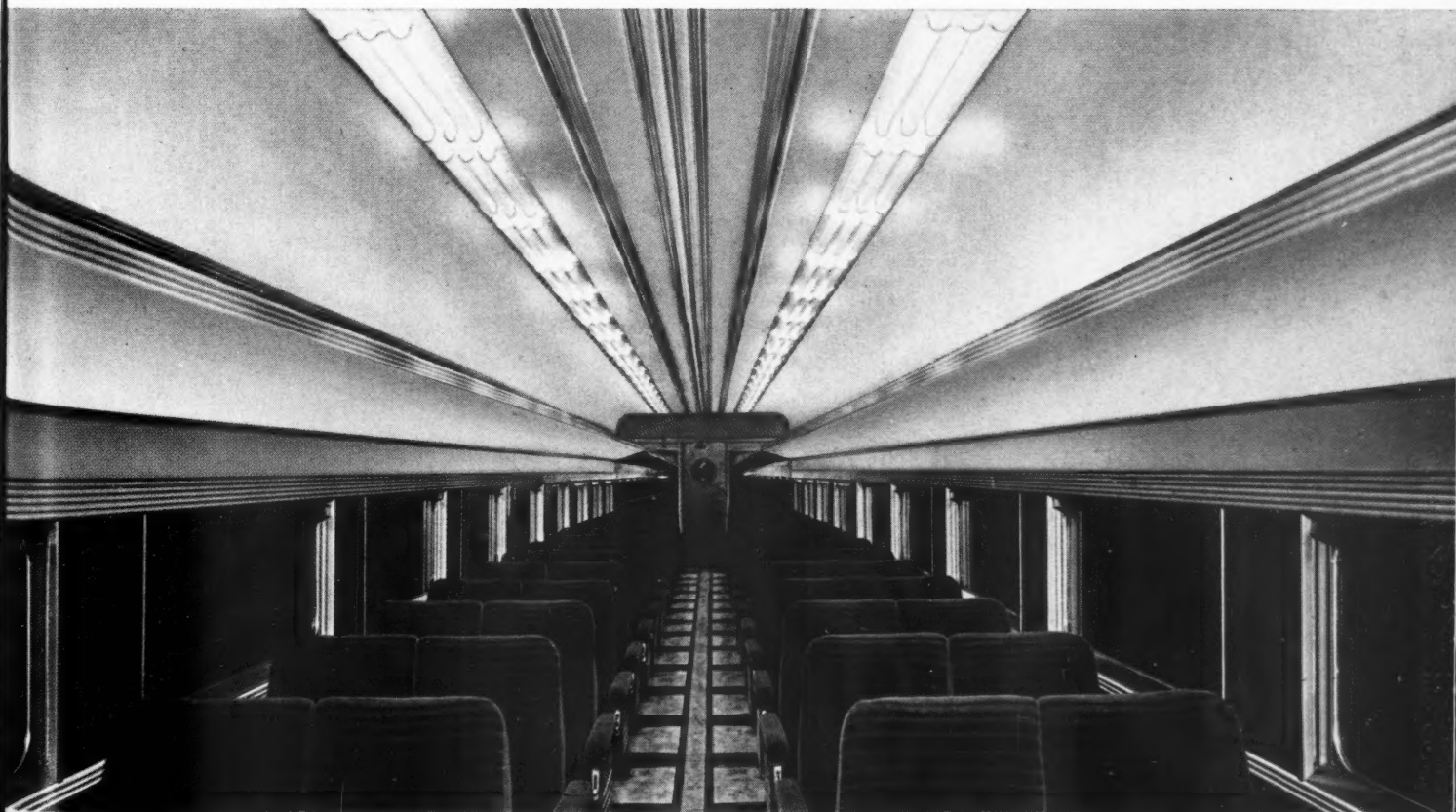
YOU MUST SEE this car to appreciate the
magnificent achievement of the oldest steel
passenger car builder. It is on display at the
Railroad Exhibit of the New York World's Fair.





● THE EXTERIOR provides unusual beauty and neat smooth appearance . . . the long windows are grouped to give a lateral and streamlined effect.

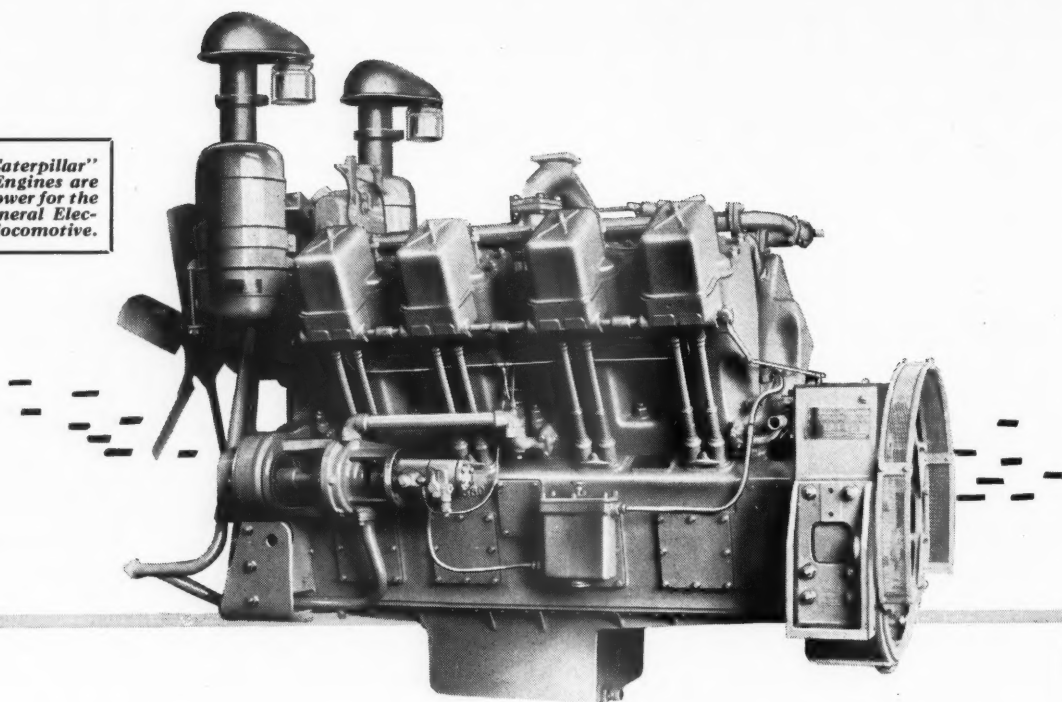
● THE INTERIOR is strikingly new . . . latest window frame construction . . . lighting designed to give clearer reading and more equal diffusion of light throughout the car . . . new adjustable reclining seats for passenger comfort . . . air conditioning without drafts . . . scientifically planned color scheme to enhance passenger environment. The long windows provide a range of vision greater than that of an observation car. The interior appointments were designed in collaboration with Lurelle Guild, industrial designer of New York City. This interior can be readily altered into Lounge, Buffet, Parlor and other types of cars to meet individual Railroad requirements.



PRESSED STEEL CAR COMPANY, INC.
P I T T S B U R G H, P A.

Proven Performance!

Two of these "Caterpillar" Diesel D17000 Engines are being used as power for the new 44-ton General Electric switching locomotive.



● The superior performance of "Caterpillar" Diesel Engines for railroad switching service is again being demonstrated through General Electric's selection of D17000s for powering their new 44-ton Diesel-Electric switching locomotives—and by the fact that there are now more "Caterpillar" Diesel D17000 Engines powering 44-ton switching locomotives than all other makes of Diesel engines combined.

Here are some advantages which this rugged, heavy-duty "Caterpillar" Diesel offers you —

- 1 Burns a wide range of fuels, including No. 3 furnace oils — premium, "high speed" Diesel fuels are not required.
- 2 Has a simple design and rugged construction—proved by records of long life on heavy-duty power jobs all over the world where the operator has no special knowledge of Diesel engines.
- 3 Can idle long periods economically, cleanly, then pick up the load immediately—this on No. 3 furnace oils.
- 4 Requires no frequent or delicate adjustments—long intervals between inspections.
- 5 Has absolutely no operating adjustments on the fuel system.
- 6 Service facilities unequalled by any Diesel engine manufacturer.

The "Caterpillar" Diesel D17000 Engine is well suited for the 44-ton size switching locomotive. This is being demonstrated daily by the D17000 engines already being used in this service. They provide ample power, and because of their rugged design and construction, medium speed and moderate B.M.E.P. (rating) they deliver *full time* power at unusually low fuel and maintenance costs.

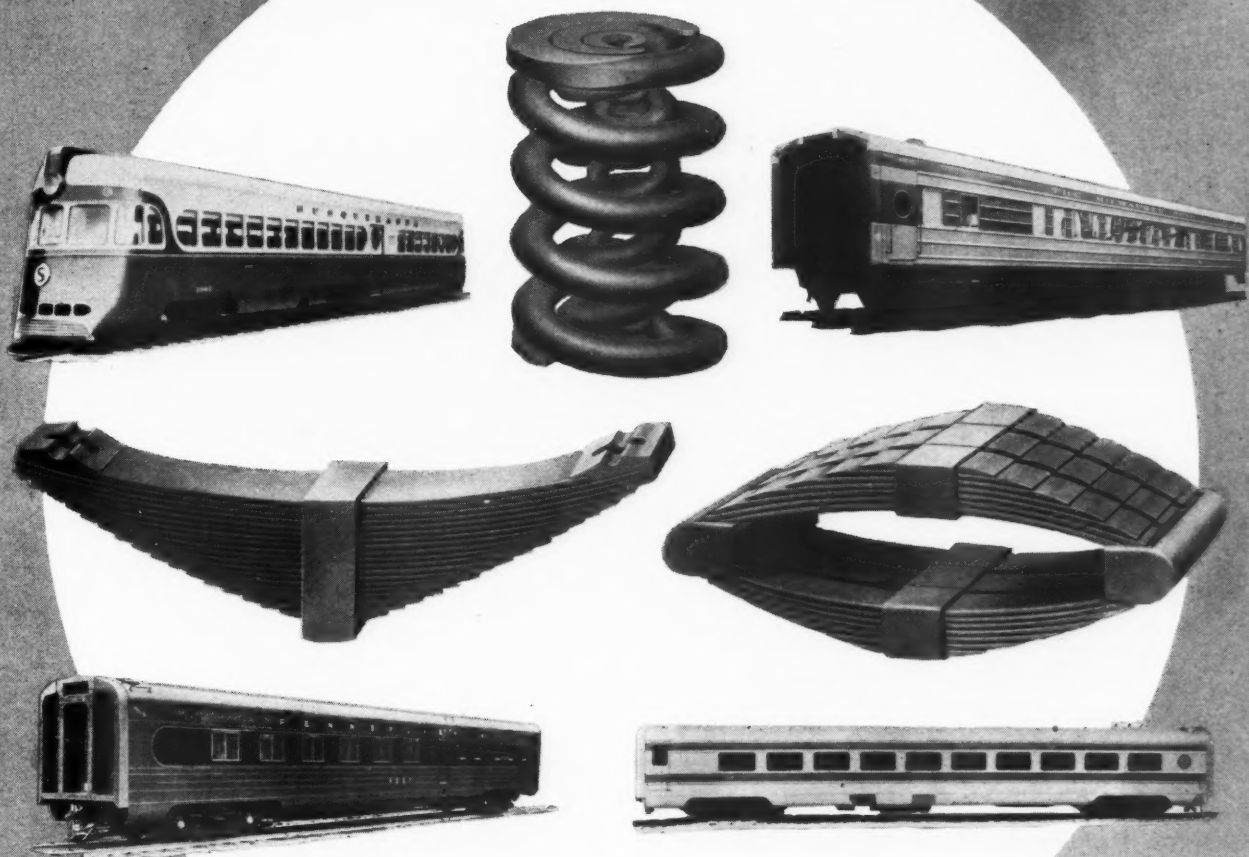
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DIESEL ENGINES and ELECTRIC SETS

"RAILWAY" SPRINGS

*are first choice in
Modern - Easy Riding Cars*

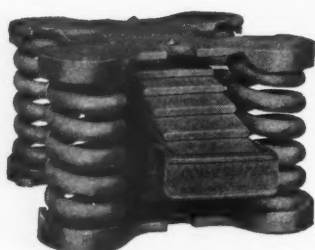


MOST significant is the fact that many of the latest deluxe passenger cars in high speed service are equipped with "Railway" easy riding springs.

Not only do passengers appreciate the comfort, but maintenance is reduced to a minimum in these well sprung cars. They are all around revenue producers. "Railway" quality springs are used to advantage in all rolling stock, locomotives, passenger cars and freight cars.

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Railway Steel Spring Division
30 CHURCH STREET, NEW YORK, N. Y.

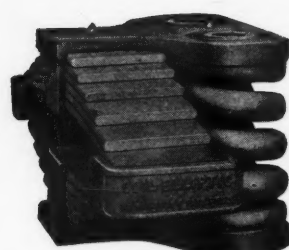
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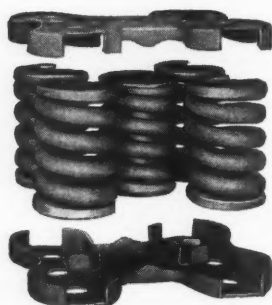
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slows up recoil
more effectively.



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in resistance
towards end of
stroke protects
springs.

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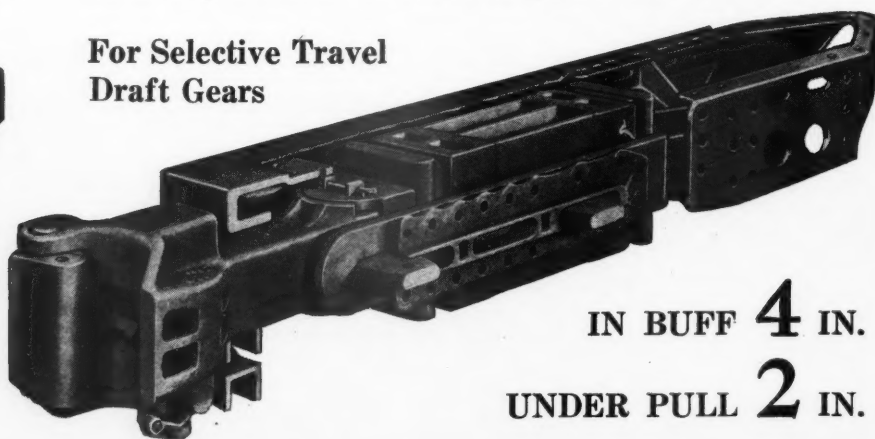
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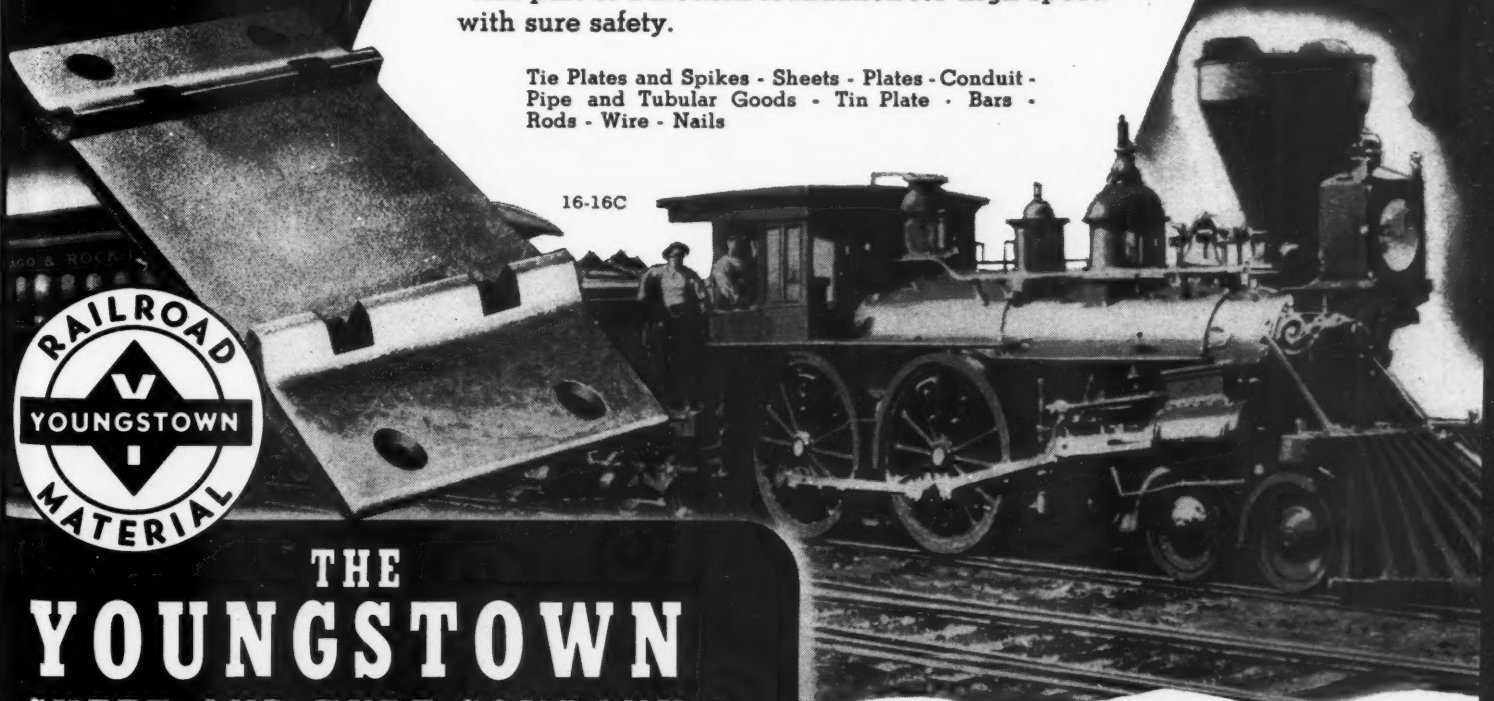
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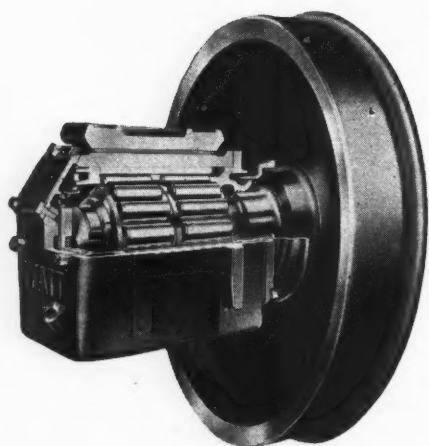
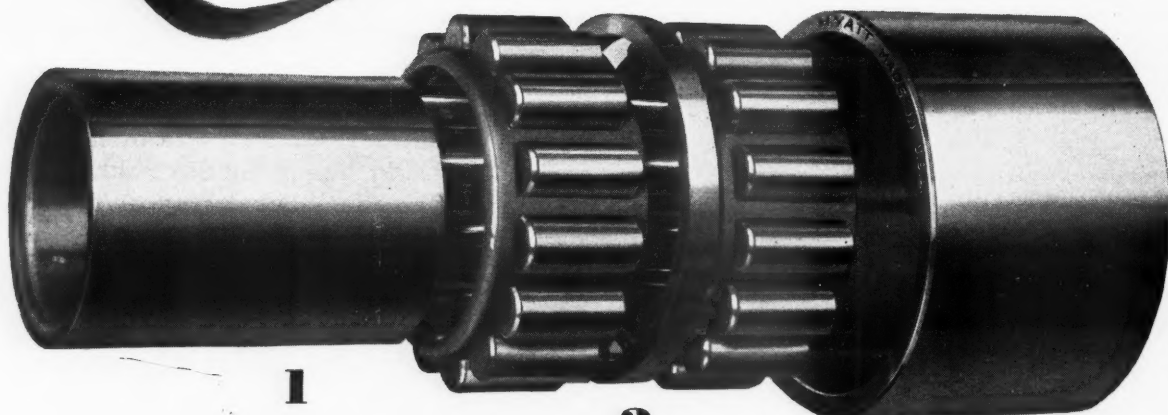
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R O L L E R B E A R I N G S

Q U I E T

The Week at a Glance

C. & N. W., A PORTENT: The federal court having put its blessing on the reorganization of the C. & N. W., which deprives holders of 181 million dollars of stock of their property, the leading editorial herein analyzes the significance of this execution to other railroads and the economic life of the nation. The attempt is already being made to use the beaten-down capitalization of "wringered" roads as a basis for rate-making—and what do the solvent carriers think of that? Do the "institutional" investors who will replace the former owners of these "wringered" roads believe that their ownership will be any more sacred to the political executioners of property than that of their predecessors? How much new "venture capital" is an industry likely to command which thus sends "venture capitalists" to the chopping block? What does business generally think of this *official recognition of the permanency of the New Deal depression*? Why should other businesses believe that they are to be immune from this process of confiscation?

LOVE YOUR ENEMIES: The Railway Labor Executives' Association has once again made an accurate, forthright and courageous statement against the flimsy "national defense" argument which "superhighway" advocates are using to try to put over a gigantic and perennial raid on the treasury for the benefit of self-seeking private interests. The labor executives understand and clearly express the inconsistency in spending tax money for non-essential and duplicative transportation facilities, calculated to "destroy the most important vehicle of defense this nation possesses" (i. e., the railroads). What is hard to understand is how, sincerely upholding these views, some of the labor executives also find it possible to endorse the New Deal for a third term. Because the New Dealers are incorrigible "government investors"—they propose that federal expenditures on these super-highways and super-bridges and super-tunnels and super-canal become a *permanent* policy of the government—meaning more and more tax-supported and tax-exempt competition for the railroads and railroad employees.

BOX CAR MARGIN LOW: "A serious drain on the Western box car supply, attended by some very tight local situations, and putting the entire Western district on a close margin for box cars" is how the Car Service Division explains its request to Eastern and Southeastern carriers to get Western box cars back home without delay.

TIE RENEWAL SCIENCE: When track is raised on new ballast, economy calls for replacing not only those ties whose useful life is ended but also those which will be ready for retirement within a year. It is so much cheaper to put ties into raised track than it is to dig them in (besides putting the tie immediately to work supporting the track structure) that to throw away a year's tie life represents

true economy. Such is the reasoning advanced by Maintenance Engineer Clarke of the Burlington in an address to the Roadmasters' Convention, reported herein. Mr. Clarke's paper also takes up the questions of when to substitute a special tie gang for section gangs on a tie renewal job; the special tools available for tie work; and the need which exists for the mechanization of tie handling.

ELMER SMITH ON RATES: The Illinois Central's distinguished authority on rates and transportation policy is the principal contributor to the "traffic box" on the editorial pages herein. He agrees with the opinion heretofore ventured in that space that the railroad problem is principally one of gross revenues, and also that motor carrier statistics indicate that trucks are now handling traffic which would move more economically by rail. Our competitive traffic observer, in commenting upon Mr. Smith's conclusions, suggests that the rate structure ought to embody *incentives to shippers*, to make them friends of economical practices. If more economical service were associated with lower rates and less economical service with higher rates, probably the shippers would be greater friends to economy than they often are today.

SHIPPER OPINION SURVEY: The correspondence received by this publication as the result of mailing our "Freight Progress Issue" (May 25) to thousands of important shippers all over the country gives a key to customer-opinion of railroad service—what they like about it and what they don't. A digest of this customer-opinion, as revealed by their letters, is given in an article herein—which ought to prove suggestive to sales-minded railroaders (and, from the shippers' opinions, that is one thing the carriers need more of).

NEW DELUXE COACH: A new design of a light-weight coach (Cor-Ten steel) has been developed by the Pressed Steel Car Company, and is described in detail herein. Aside from its structural characteristics, the car also embodies novel features for customer comfort—among them being a window which improves the view of the passing scenery instead of centering the passenger's vision on adjoining track (thus minimizing the sense of speed rather than accentuating it).

OIL COS. FIND A FRIEND: The National Defense Advisory Commission has taken sides with the large oil companies in the attorney general's suit to compel them to divest themselves of pipe lines and tank vessels. The Defense Commission fears the suit might discourage the oil people from building additional gasoline pipe lines to the Eastern states, which the Defense Commission favors—so that, in the event of hostilities, the navy may avoid having to convoy tankers around Florida and up the Atlantic seaboard.

"TAXES" WHICH AREN'T: They neither slumber nor sleep—the politicians who toss on their pillows nights devising devious schemes for giving the treasury to the competitors of the railroads. This week a bill has gone into the hopper which would segregate all the excise taxes and federal government collects from motor fuels, and add the funds so assembled to the federal highway aid kitty. These excise taxes serve now, in part, to offset the expense of federal aid—but, under the proposed dispensation, federal aid would become simply a tribute on all other enterprise for the aggrandizement of motor transportation. They have got away with this consume-taxes-but-don't-pay-them program in a number of states by constitutional amendment, so why not try it in Washington?

MINIMUM WAGES: Final hearings were held this week on the proposal to establish 36 cents as the minimum wage for class I roads and 33 cents for short lines. Neither managements nor unions asked that the order be set aside, but several smaller lines questioned the constitutionality of the act and other carriers made reservations.

CHICAGO BOARD CHANGE?: A bill which would completely revamp the National Railroad Adjustment Board set-up has been introduced "by request" (of the Short Line Association) by Senator Smith of South Carolina. The provisions of the bill are reviewed in the news pages herein. Principal changes proposed are to have one-third of the board members appointed to represent the public, to have cases conducted under "procedural due process," and to make decisions amenable to review by the courts.

LOADINGS RISE PREDICTED: Fourth quarter freight carloadings are expected to be about 7 per cent above 1939 loadings in that period, according to the Shippers' Advisory Boards. The biggest loadings increase (22 per cent) is expected in the territory of the Northwest board, while the Atlantic States body foresees a rise of over 11 per cent and the Southeast a boost of more than 10 per cent. Smallest increase (less than 1 per cent) is forecast by the Ohio Valley shippers.

CHUMMY RATE PROBE: An "informal conference" of parties of record in the I. C. C.'s general investigation into rail and motor rates and classifications will be held at the Morrison Hotel, Chicago, on October 28, preliminary to formal hearings. The regulators are seeking light on where to start in on this gigantic undertaking—and also to develop suggestions which may help give direction to the studies and statistics which participants will wish to enter into the record. Meantime, another informal reception will be staged by the Commission at the Biltmore Hotel, Atlanta, on October 17 as a preliminary to its inquiry into classification changes in the Southeast.

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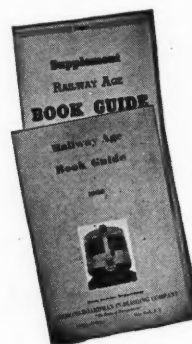
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readers of "Railway Age." In it are
described practically all of the books
published during the past decade that
are in print. They are classified under
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back facilitates quick reference.

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NATIONAL CARBIDE LIGHTS

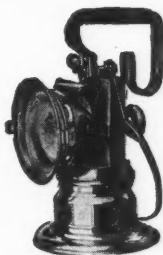


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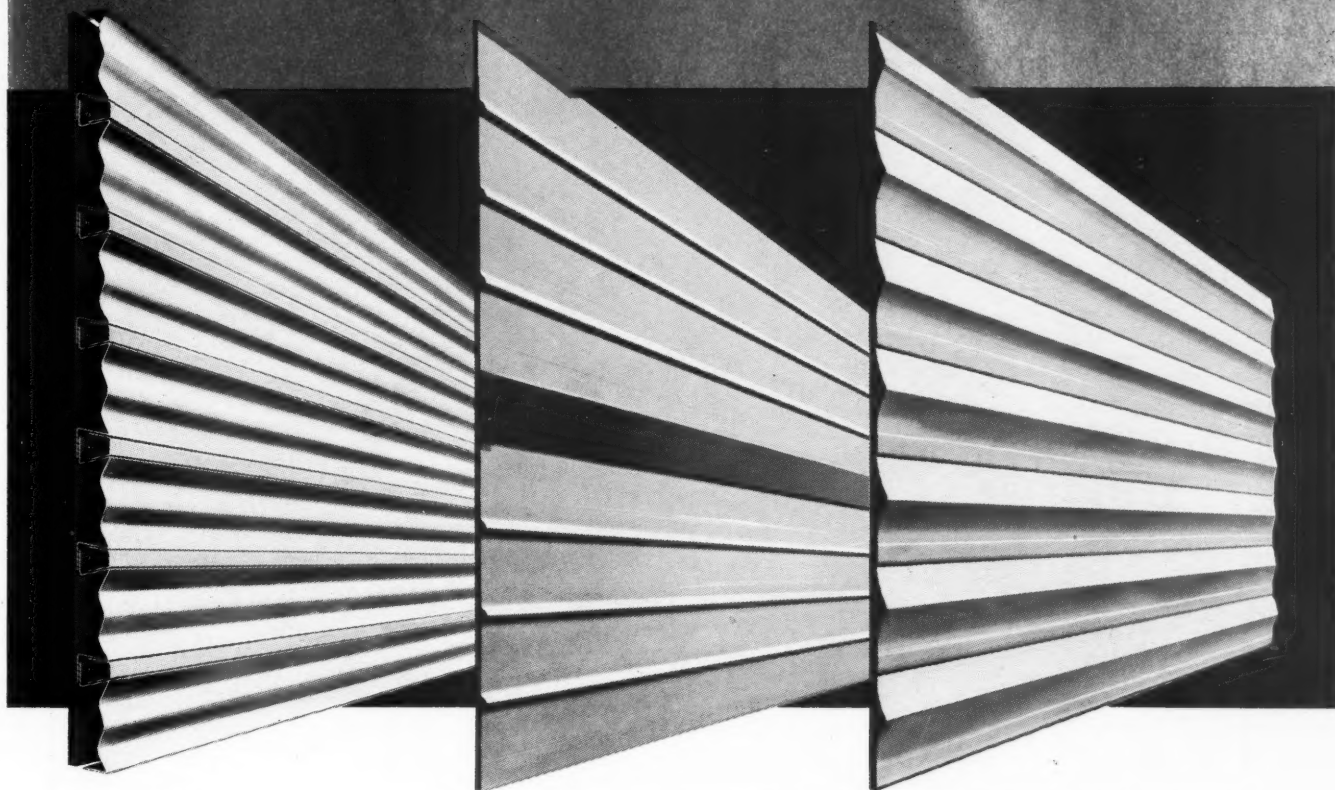
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American Hair & Felt Co.	14		
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Specimen panels on exposure test at New Kensington.

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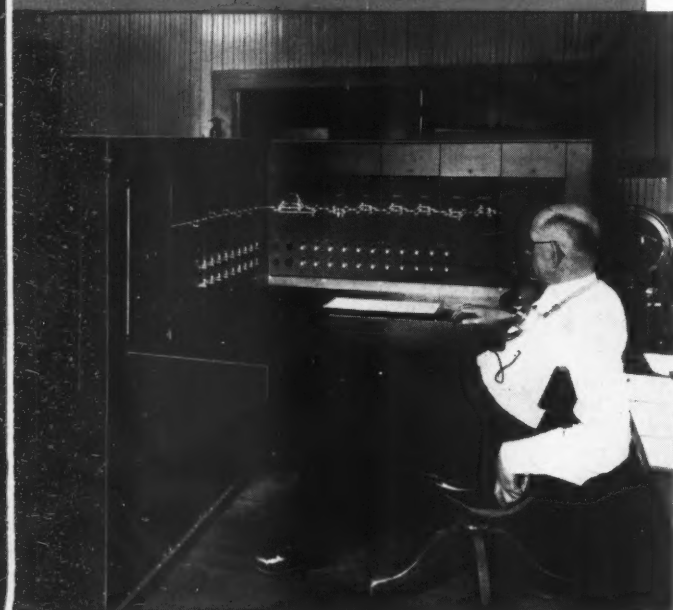


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